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The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory

AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★

Technical Governmental

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Inside Dope

By George F. Taubeneck

Maxon vs. Galbraith
Alpha vs. Omega
Divergent Philosophies
70 Years Old
'People Who Give a Damn'
Winning the War

Maxon vs. Galbraith

One of the hottest intra-mural fights now going on within the government bureaus is that between Lou Maxon and Dr. J. K. Galbraith for policy control of the OPA.

Galbraith is a hold-over from the Henderson regime, and is strongly backed by the Statistics Shufflers from Henderson's gang. Maxon was brought in by Prentiss Brown with the principle purpose of selling OPA to the people.

Galbraith is a foremost proponent of the "make 'em suffer" school; Maxon believes in inducing cooperation, rather than "cracking down" just for the joy of seeing 'em squirm. Maxon believes that the people are fundamentally honest and anxious to help win the war. The old policy was that the people can't be trusted.

For political reasons Brown, a staunch Democrat (and former Senator from Michigan) has been unable to fire Galbraith, who has strong New Deal and labor backing. And Galbraith, who has the stoutest of honest convictions, isn't taking OPA's change of tactics lying down.

The result is a ding-dong fight which has the whole bureau in a turmoil. Some kind of explosion is probably due.

Alpha vs. Omega

You never saw two more natural antagonists. They are as far apart by nature as nature will allow.

Maxon is a self-made advertising man whose agency is one of the biggest in the country, handling General Electric, Ford, Heinz, Weatherhead, and many other major accounts. He rose from nothing to riches in less than a decade, and is now probably no more than 40 years of age.

Galbraith is a Canadian who previously has spent his time teaching college classes. He got into politics by electioneering for Franklin Roosevelt when he (Galbraith) was an instructor at Princeton. He is in his thirties.

Maxon is built like a professional football player which, in fact, he once was. Of medium height, he is burly and bull-like in physique (which he still keeps up as a fetish).

Galbraith is as tall as a center on a Texas basketball team, but he's far removed from the athletic type. He wears thick-lensed glasses, is flat-chested, and gets his exercise saying "No!" to people.

Maxon is as friendly as a collie dog. Nearly everyone likes him on sight, and he likes everyone. He is gregarious, entertaining, a salesman from the word "go."

Galbraith doesn't seem to like anybody. He's cold, morose, lugubrious. Although three of Maxon's clients are advertisers in the NEWS, and he lives around here somewhere, we haven't laid eyes on him in six years. Nevertheless we're darned sure that the moment he did come in view a big grin would light up his face and that huge paw would shoot out a mile for a hearty handclasp.

Galbraith, on the other hand, sat next to us for five hours at a dinner in Washington's Willard hotel, and we talked about everything under the sun. Yet a few weeks later in the Social Security Bldg. he had to be introduced all over again, and he has never recognized us since, although we encounter him fairly often.

(Concluded on Page 6, Column 1)

Campbell-Ewald Agency to Handle Norge Advertising

DETROIT—Campbell-Ewald Co. of this city, one of the largest and foremost of the nation's advertising agencies, has been appointed advertising agency for Norge, it is announced by Howard E. Blood, president, Norge division of Borg-Warner Corp.

J. H. Neebe is the account executive. Mr. Neebe is now on a swing around the Eastern territory with M. Glenn O'Harra, Norge vice president.

Although Campbell-Ewald has largely been identified with the automotive industry and has had no accounts in the refrigeration field in the recent past, several years ago this agency handled Copeland.

Norge, peacetime manufacturer of refrigerators, oil furnaces, space heaters, washing machines, and ranges, is now fully engaged in the manufacture of aircraft parts, hydraulically operated high-speed gun turrets, gun mounts, and other war products.

Repairmen Eligible For 1942 Autos

WASHINGTON, D. C. — Installation, maintenance, or repair service men are included in the new list of essential users eligible for the purchase of 1942 hard-top passenger automobiles with a manufacturer's list price of under $1,500, the Office of Price Administration announces.

By amendment to ration order 2B (passenger automobiles) this eligibility list becomes a part of the automobile rationing regulations and displaces the old cross-reference method which gave eligibility to anyone who needed a car for the purposes listed in the "C" list of the gasoline rationing regulations. The amendment becomes effective May 1.

Under "persons eligible for any 1942 car" in the amendment is found the following: "An engineer, architect, technician, construction worker, repair or maintenance man, for performing or for transporting materials or equipment necessary to perform the following services: 1. Construction work; 2. installation, maintenance, or repair services."

'Distressed Plants' Urged to Seek Aid

WASHINGTON, D. C.—Distressed plants on the lookout for contracts to keep them going are urged by the Smaller War Plants Corp. to ask for assistance by filling out form 2282, a simple one-page record, from which SWPC will work to find a means of supplying orders.

SWPC defines a "distressed" plant as one doing less than two-thirds of its normal peace-time volume. Normal volume is defined as the average of a company's five-year record.

According to Col. Robert W. Johnson, Chairman of the SWPC, there are about 2,500 small plants in the country today who have suffered undue hardships under war conditions.

Equipped with sufficient data the SWPC will be in a better position to assist distressed plants in obtaining necessary orders.

Along with form 2282 which gives fundamental information should go a "facilities report," or form 1546. Plants are requested by SWPC to file both reports with their nearest War Production Board regional office.

Form 1546 lists full information about the volume and extent of normal production and employment, amount and type of facilities and equipment available, productive capacity, and financial status.

Price Ceilings Set on Used Washer Sales

WASHINGTON, D. C.—The OPA last week established dollars-and-cents maximum prices on all sales of used washers by dealers, auctioneers and individuals.

A new regulation, Maximum Price Regulation No. 372 (Used Domestic Washing Machines) effective May 3, 1943, establishes ceiling prices at March, 1942, levels on guaranteed machines, and at October, 1941, levels on machines sold "as is." These basic prices were determined by OPA in an extensive national survey.

Householders selling these machines are brought under price control for the first time. OPA also for the first time placed ceilings on rates for rental of used washing machines. Rentals are limited to $4.50 for the first month and $3.50 monthly thereafter regardless of the type of machine being rented. These charges include pick-up and delivery as well as service during the period of rental.

All sales in the course of trade, hitherto have been under the General Maximum Price Regulation, but this control was unsatisfactory in checking price advances because of the difficulties in ascertaining March, 1942, ceilings for each individual seller for the large variety of models.

Because of the halt in production of new washing machines by the War Production Board last year, and resulting heavy demand for used models, prices of the used machines have moved to inflationary levels.

The new regulation covers sales and rentals of all washing machines which have ever been used or which have been in a consumer's possession for at least 90 days even though not actually used. Sales by a foreign seller to any domestic buyer are the only exemptions from the regulation.

Text of Maximum Price Regulation 372 (Used Washing Machines) is published on pages 18 and 19 of this issue of Air Conditioning & Refrigeration News.

Ceilings will range all the way from $6.67 to $147.50 in the new regulation. Twelve categories are established, A to L, following traditionally accepted quality brackets. Four types of sales may be made in each category. Used washing machines guaranteed for 12 months or more will have ceilings from $34.75 to $147.50.

Machines guaranteed for at least six months will have maximum prices ranging from $29.75 to $142.50. Machines sold "as is" and not guaranteed have two groups, with maximum prices of $6.67 to $70.00 on

(Concluded on Page 4, Column 4)

Midwest Jobbers Meet May 16 in Des Moines

DES MOINES, Iowa. — Spring meeting of the Midwest Refrigeration Supply Jobbers Association will be held May 16 at the Ft. Des Moines Hotel here, according to J. F. Wickham, secretary of the association.

The meeting will start at 10:30 a.m. Sales representatives of allied lines as well as members will attend the meeting.

Hurley Leaves WPB Post; Succeeded by Keefe

WASHINGTON, D. C. — John A. Hurley has resigned as director of the Wholesale and Retail division of the War Production Board. Mr. Hurley will be succeeded by Kenneth M. Keefe, who has been with the Consumers Goods division of the WPB since its inception.

Mr. Hurley was formerly manager of the 1900 Corp., manufacturer of washing machines.

Civilian Requirements Are Given Better Position in WPB Shift

At Rema's Helm

R. H. LUSCOMBE

Mr. Luscombe, of Penn Electric Switch Co., is the new president of the Refrigeration Equipment Manufacturers Association. Throughout the life of this industry group Mr. Luscombe has been one of the most active of the members' representatives, having a hand in most of the activities sponsored by the association.

'Repair & Maintenance' Facilities Will Receive Special Consideration

WASHINGTON, D. C.—An administrative order setting up the Office of Civilian Requirements within the War Production Board, and giving it the powers necessary to provide civilians with all essential goods and services except food, housing, and transportation, was issued May 1 by Chairman Donald Nelson of WPB.

The Office of Civilian Requirements will succeed the Office of Civilian Supply and will be headed by Arthur D. Whiteside, president of Dun & Bradstreet, Inc.

"It shall be the objective of the War Production Board," the order states, "to provide consumer goods and services adequate to maintain essential civilian life and the highest productive efficiency, to the end that the maximum productive power of the civilian populations may be attained in the support of the war effort."

Consumer goods and services are defined as meaning "all products and services personally consumed or used by individual civilians in the United States (including maintenance, repairs, and operating supplies for household or consumer use), except such products and services under the jurisdiction of the following claimant agencies: War Food Administration in the Department of Agriculture, National Housing Agency, and the Office of Defense Transportation.

As regards civilian requirements generally, they will be determined by Mr. Whiteside and presented to the requirements committee, the Office of Civilian Requirements acting as a claimant agency on the same basis as those which represent the armed services, Maritime Commission, etc.

When an allocation of materials has been made OCR will distribute it among the various types of consumer goods. It will thus have complete control over the production as well as the distribution of consumer goods within the overall civilian allocation. But it will have nothing to do with the machinery which makes those civilian goods.

The example is given that if a mill needs repair parts its application and the setting aside of enough controlled materials to cover all such applications will be the responsibility of the operations vice chairman of WPB.

Office of Civilian Requirements, however, will have jurisdiction over the supply of repair parts for autobiles, household refrigerators, etc.,

(Concluded on Page 24, Column 1)

Dinegar Forecasts Improved Chances For Civilian Lines

NEW YORK CITY — Manufacture of essential civilian requirements must not be subordinated to arms production because it is of equal importance to the war program, Henry A. Dinegar, chief of the Durable Goods Branch of the Office of Civilian Supply WPB, told the National Retail Furniture Association.

"Essential," defined by Dinegar, is that degree below which more would be lost to the war effort than would be gained by further sacrifice. Warning of impending breakdowns in civilian supply lines, he declared that the time has come for the government to lend itself to the task of insuring civilian production as well as military.

A confusion of several elements, aside from military demands, is contributing to the weakened civilian production, he said, pointing out especially the imperfect coordination of price controls, tax restrictions, etc.

Without making actual forecasts on wood furniture production for 1943, Dinegar did say that the trade itself estimated a possible total of between 70 and 80% of the 1941 volume. He also intimated that, in case production did not come up to expectations, some revision might be made in L-260 (order restricting patterns and use of hardware). In this connection, Dinegar stated that consideration is being given to an amendment to L-49 which would permit the bedding industry to make full use of its frozen spring inventories.

Universal Cooler Nets $104,034 In 6 Months

MARION Ohio—Universal Cooler Corp. showed a net profit for six months ended March 31 of $104,034 or 17 cents a share on 306,386 shares of class B stock after dividend requirements on class A convertible participating stock.

Brock Williston Of Acme is Dead

JACKSON, Mich.—M. Brock Williston, vice president in charge of sales, Acme Industries, Inc., died at his home here May 4 following a prolonged illness which had confined him to his home for several weeks.

Mr. Williston was widely known throughout the air conditioning and refrigeration industry in which he had been a prominent figure for many years.

Born in Jackson, Mr. Williston for a number of years was engaged in the building supply business in Detroit where he headed his own company. He returned to Jackson to join Acme Industries in 1932.

Mr. Williston is survived by his wife, Mrs. Ruth Williston and a son, Richard Williston.

Mr. Williston's passing is the second loss by death suffered by Acme Industries within a fortnight, L. W. Horr, sales engineer for the company, having died April 24.

The Priorities Quiz

(Air Conditioning & Refrigeration News, with the aid of a man who is actually engaged in handling much priorities work, will attempt to answer questions from readers about priorities problems. The editors will not guarantee to answer all questions, nor can they guarantee that the answers will be legally perfect, but an effort will be made to provide a guide to correct procedure wherever possible.)

Status of Orders Without Allotment Numbers

Q. Now that distributors are permitted to extend allotment references to producers to replace items which they have shipped from their inventory, is it not possible that orders already on file with producers not carrying allotment references may never be shipped because of the fact that a preference rating with an allotment number is superior to a preference rating without an allotment number?

A. Under CMP regulations, as originally issued, this would have been true. However, this has now been corrected by a recent amendment to CMP Regulation No. 3 which temporarily delays the effect of these rules as to orders which dealers, distributors and jobbers had placed with suppliers previous to April 7, 1943, calling for delivery not later than June 30, 1943. The amendment provides that such orders without allotment numbers must be deemed of equal rating with orders bearing the same grade preference rating with allotment numbers.

In other words, supposing you as a distributor had placed an order rated AA-4 on April 1 for delivery in June of items to replace in your inventory similar equipment which you had previously sold on a rating of AA-4. Under CMP before this amendment, this order could not be shipped until all orders with AA-4 plus allotment number had been shipped first. This amendment now makes that order of equal rating with any AA-4 order with allotment number and in accordance with Priorities Regulation No. 1 this AA-4 order without allotment number must be shipped ahead of any AA-4 order with allotment number placed with your supplier at a later date.

Use of Copper Tubing In Installer's Stock

Q. May I ask for your interpretation of the new M-9-c order as it regards copper tubing and fittings which one has in stock and does not want to replace. Is it possible to use such material either in installing new equipment which is covered by priority or in installing used equipment?

A. The restrictions of M-9-c do not apply to the installation of any copper item or article or part (including repair parts) for the ultimate consumer on his premises. In installing refrigeration equipment, for example, your copper tubing and fittings could be used without violating M-9-c.

This is covered by Section H, Paragraph 6 of M-9-c which warns, however, that any installation must also comply with the terms of M-9-c-4 which prohibits the installation of tubing and fittings in certain types of building construction. M-9-c-4, however, does not prohibit the use of your fittings and tubing in installing refrigerators and other devices which themselves become attached or built into a structure.

It is important to remember that the installation of new or used equipment must also comply with the terms of L-38 and the L-5 series.

End Use Information Is Still Helpful

Q. Is it necessary for us to show end use information on our orders now that CMP has come into effect?

A. During this second quarter transition period, your suppliers are still required to show end use information to certain of the controlled materials branches (particularly, the Copper Section) in order to secure allocations of foundry materials needed to produce your supplies. During the rest of the second quarter, therefore, it is important for you to continue showing end use wherever possible using the allocation classification system and to supply in addition thereto all the detailed end use information that you can.

It is expected that after July 1, it will not be necessary for you to show end use symbols. CMP has recently issued an entirely new set of Class B product symbols and is assigning these symbols to third and fourth quarter advance allotments of materials.

A directory of the symbols has been issued and it is purposed to substitute these symbols for the present end use codes—each CMP symbol, therefore, starting with the third quarter will signify end use in itself.

It is suggested that you write your Regional Office of the War Production Board for a copy of WPB Release No. 3174 which sets out in full the new product allotment symbols.

On Inventory Reports --Wait for a Request

Q. Do we, as a manufacturing concern, have any responsibility, now that the first quarter has passed, to file an inventory report with the Controlled Materials Plan Section under CMP Regulation No. 2?

A. During the first quarter if you reported your inventories to the CMP Section of the War Production Board on Form CMP-7 you, undoubtedly, will have received the new combination form WPB-732 and CMP-7 which was mailed last week to some 15,000 manufacturing concerns. WPB-732 was formerly just a monthly report of plant operations. If you have received a copy of this form, you must complete and return it to the Board of Census on or before May 3 The old rule still applies, however, that under CMP you do not take the initiative—that is, do not file an inventory report until requested.

Correct Certification of Orders at This Time

Q. There are so many new official certifications now in effect that it is confusing. Can you suggest a rule to follow that will assure us of properly certifying our orders so that they will not be delayed because of some error in the form we may have used.

A. This confusion should tend to clear up after the second quarter transition period has passed. Meanwhile, there are only two certifications you need use. The first is the certification issued in CMP Regulation No. 7.

"The undersigned purchaser certifies, subject to the penalties of Section 35 (A) of the United States Criminal Code, to the seller and to the War Production Board, that, to the best of his knowledge and belief, the undersigned is authorized under applicable War Production Board regulations or orders to place this delivery order, to receive the item(s) ordered for the purpose for which ordered, and to use any preference rating or allotment number or symbol which the undersigned has placed on this order."

This may be used in place of any of the other CMP certifications and must be used wherever you are extending both a preference rating and an allotment symbol.

The second is the certification in Priorities Regulation No. 3. You must continue using this certification where you are extending a preference rating only and no allotment number.

"The undersigned purchaser hereby represents to the seller and to the War Production Board that he is entitled to apply or extend the preference ratings indicated opposite the item shown on this purchase order, and that such application or extension is in accordance with Priorities Regulation No. 3 as amended, with the terms of which the undersigned is familiar."

Do not confuse the two certification paragraphs; otherwise, your order may be returned to you for proper certification. That is, the certification in CMP Regulation No. 7 may not be used where you are extending just a preference rating, neither may the certification under Priorities Regulation No. 3 be used where you are extending both a preference rating and an allotment symbol.

Information on CMP In a 'Nutshell'

Q. Are there any recent publications which would give us, "in a nutshell," the substance of the Controlled Materials Plan and how it operates taking into consideration all of the recent revisions that have been made.

A. Yes. Write to the Educational and Inquiry Branch, Controlled Materials Plan Division, War Production Board, Washington, D. C., and ask for their pamphlet entitled, "Questions and Answers Regarding Operations Under the CMP."

MRO Symbol Can't Be Used to Allot Materials to Others

WASHINGTON, D. C. — Persons operating under the terms of CMP Regulation No. 5 are not permitted to use the MRO symbol for the purpose of making allotments of controlled materials to others. This is made clear in Interpretation No. 2 of that Regulation, announced today.

The interpretation presents the following example:

"A manufacturer of a product listed in Schedule I or II of the Regulation requires a spring as a repair part. He may use the symbol to place an authorized controlled material order for steel which he will fabricate into the spring which he requires, but if he buys the spring from a spring manufacturer, he may not make an allotment with the MRO symbol to the spring manufacturer. The spring manufacturer receives his allotment direct from WPB as provided in paragraph (k-1) of CMP Regulation No. 1."

Paragraph (k-1) of CMP Regulation No. 1 provides that the spring manufacturer in this case should make application for his steel directly to the appropriate industry division of WPB on Form CMP-4B.

Lippman Directs Canton Westinghouse Plant

EAST PITTSBURGH, Pa.—F. D. Newbury, vice president in charge of the Emergency Products Division of the Westinghouse Electric & Mfg. Co., has announced the appointment of W. O. Lippman as manager of the company's Canton ordnance division.

Mr. Lippman succeeds R. V. Gavert who is being transferred to another Westinghouse plant. For the past four years Mr. Lippman has been works manager of the Westinghouse electric appliance division's plant in East Springfield, Mass. He joined the company at its East Pittsburgh Works in 1918, the year he was graduated from Pennsylvania State College.

The Changing World

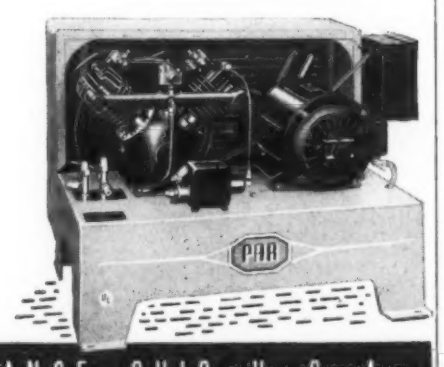
★ ★ ★ Housewives riveting . . . office workers running intricate machines . . . men from every walk of life studying mechanics in the services. Yes, this is a changing world.

★ ★ ★ These are the people who will make up tomorrow's market . . . a market keenly aware of mechanical perfection . . . a market with the ability to choose outstanding products.

★ ★ ★ PAR Condensing Units will appeal to this mechanically minded America of the future. For the experience gained in our war assignments will be added to our well-known ability and facilities in producing condensing units that are outstanding in their fields.

Manufacturers of PAR Commercial Refrigeration Equipment

PAR DIVISION



LYNCH MANUFACTURING CORPORATION • DEFIANCE, OHIO, U. S. A.

Continental FARM LOCKER PLANT

GIVES FARMERS MORE TIME FOR Productive Work

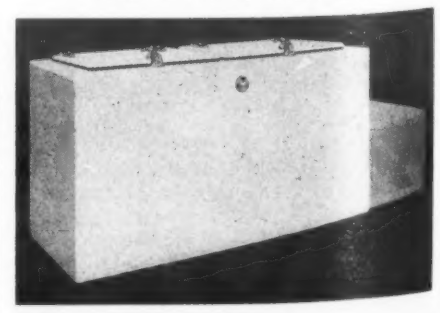
Farm-grown fruits, vegetables, farm-killed meats, poultry and game can be quickly FROZEN and kept in FROZEN STORAGE right in the farm home! Avoids "time out" for frequent trips to town. Saves tires and gasoline. Provides adequate capacity for wide food variety, and remarkable savings in food costs due to elimination of waste.

★

Illustrated—Model C-1243. Capacity, 11.5 cu. ft. net. Holds up to 575 lbs. of frozen food. Has SEPARATE Freezing compartment.

★

SANITARY REFRIGERATOR CO.
Fond du Lac, Wisconsin



FOR VICTORY BUY UNITED STATES WAR BONDS STAMPS

★★ Buy WAR BONDS Now ★★

. . and FARM LOCKER PLANTS after the WAR

★ ★ ★ ★ ★ ★

New FRIGIDAIRE campaign an outstanding success

More than 3¼ million FRIGIDAIRE booklets requested in less than 2 months!

Frigidaire's plan was announced only a few weeks ago! The second campaign advertisement has just reached the newsstands! Yet even at this early date Frigidaire's new program has created widespread interest and enthusiasm.

Frigidaire dealers hail the campaign as an exceptional good will builder. They are carrying out extensive promotions in their communities to get full benefit from the powerful appeal of Frigidaire's WARTIME SUGGESTIONS booklet. They are using it to maintain their identification with the Frigidaire business, and to build good will that will be increasingly valuable to them as time goes on!

How dealers build good will with WARTIME SUGGESTIONS

Quick to seize an opportunity, Frigidaire dealers are tying in with Frigidaire's national advertising, and are providing refrigerator users with WARTIME SUGGESTIONS booklets in many resourceful ways:

- **X** Giving to store visitors
- **X** Mailing to Frigidaire users
- **X** Leaving on service calls
- **X** Mailing to store customers
- **X** Giving to Home Economics classes
- **X** Giving to Red Cross or other groups
- **X** Offering in advertising
- **X** Distributing in cooking schools
- **X** Distributing through County Home Demonstration Agents
- **X** Offering in window displays

Every day brings thousands of letters and requests for WARTIME SUGGESTIONS booklets from refrigerator users everywhere. Many request specific information. Others tell how proud they are of their Frigidaires and how interested they are in receiving help on today's food and refrigeration problems.

COMING! "How to make room in a crowded refrigerator" is the next timely message that will appear during May and June in Life, Ladies' Home Journal, Woman's Home Companion, Good Housekeeping, McCall's, Better Homes & Gardens, American Home, True Story and Farm Journal and Farmer's Wife, with a combined circulation of more than 27 million copies. Watch for it!

For Excellence ARMY E NAVY *in War Production*

FRIGIDAIRE Division of GENERAL MOTORS

Peacetime builders of Home Appliances, Commercial Refrigeration, Air Conditioners

Smaller War Plants Corp. Will Work Cooperatively With WPB In The Field

WASHINGTON, D. C.—Terms of the separation of the Small War Plants Division from the War Production Board, and an outline of the functions to be performed in the field by the War Production Board and the Smaller War Plants Corp. were announced May 4 by WPA.

The responsibilities of the WPB and the Smaller War Plants Corp. in the field offices will be divided on the broad principle that the WPB will center its activities on production and servicing in all its phases, whereas the Smaller War Plants Corp. will concentrate its activities on location of distressed plants and procurement of business for smaller plants and business concerns, and the corollary services which normally go with those functions.

Each agency will maintain a field organization of its own, but in view of the fact that many of the activities are inter-related, the offices wherever possible are to be located in the same building. However, each is to maintain clearly its separate functional identity, both physically and administratively.

Also announced today were the terms of a memorandum issued jointly by Donald M. Nelson, chairman of the WPB and Col. Robert W. Johnson, chairman, Smaller War Plants Corp., to regional directors of the WPB and the Smaller War Plants Corp. defining the respective duties of these directors.

The Regional Director for the Smaller War Plants Corp. is responsible for locating companies which require assistance and for obtaining that assistance in terms of contracts and financial help.

The Regional Director of WPB is charged with maintaining a record of facilities of plants in the region, recording the availability in plants of idle tool capacity, maintaining a list of facilities available, furnishing to the Smaller War Plants Corp. upon request engineering reports on the ability of plants to produce a given item or items, and solving production difficulties upon request from an industry division, from a branch of the Service, or from a prime contractor. The WPB and the Smaller War Plants Corp. will jointly review applications for new facilities, including machine tools, to insure the maximum utilization of existing facilities and machine tools through subcontracting.

Frozen Baked Beans Output is Doubled

NEW YORK CITY—Quick frozen baked beans wrapped in cellophane and packed in paper cartons are now available to retail trade here.

One company in the business of freezing baked beans has found the demand so great that plans are underway to increase its frozen baked bean output from 40,000 to 80,000 pounds a week soon, it is reported.

Nash-Kelvinator Net for Quarter Was $590,204

DETROIT—Nash-Kelvinator Corp. reports a net profit of $590,204 for the quarter ended March 31, after all charges including income tax, which compares with $672,360 for the same quarter last year.

At the one-half mark of the current fiscal year which started Oct. 1, 1942 Nash-Kelvinator's net profit after all charges is shown as $1,245,-135, compared with $1,557,514 for the first half of the previous fiscal year. In the same six months reserve for income tax is reported to be $2,208,-000 compared with $973,000 for the corresponding period of the preceding year.

More Plant Expansion Funds for Machinery

WASHINGTON, D. C.—Estimates of government expenditures for the industrial plant expansion program for this year reach a total of $4,500,-000,000 of which about $2,700,000,000, or 60%, will go into machinery and equipment and $1,800,000,000, or 40% of the expenditures.
into construction work, WPB reports.

This year's percentages for the expansion program vary somewhat from last year's when only 45% of the total was used for machinery and equipment, the balance being required for construction purposes.

Servicemen Should Appeal Refusal of a 'C' Gas Card

Refrigeration Sales and Service
414 Carroll Street
Elmira, New York

Editor:

We are subscribers to your paper and are operating under General Preference Order P-126, serial 3905, as Refrigeration Sales and Service Co., 414 Carroll St., Elmira, N. Y.

In your April 5 issue you published a copy of an amendment to the gasoline rationing regulations whereby service men were entitled to "C" gas cards. My card ran out on April 21, 1943 and we applied to our local board for a "C" card and attached a copy of amendment to application and explained that we did not have near gas enough to make necessary calls.

They sent me a card saying application was approved and when I went to get my card, they gave me a "B" card. I asked to see the board and was informed in no pleasant way by the clerk issuing cards I could not see anyone but to go back and write another letter explaining my requirements, which I did on April 22 and I attached another copy of your paper of the amendment and gave them our serial number of certificate of authority and told them if I could not get any satisfaction from them would take the matter up with Washington.

To date I have not heard a thing from them and am writing you asking if you could tell me who to write to in Washington as I cannot even get the courtesy of an interview with the local board. Besides refrigeration work, I have to go out in seven counties we cover and service scales, meat choppers, slicers, coffee mills, etc., which are all essential to the war effort inasmuch as the War Board wants all equipment to run that is still good.

Anything you can do for me will be appreciated and if you wish you can send this letter to the proper authorities.

B. J. BAZZETT, Partner.

Answer: Appeals from local rationing boards are not taken to Washington, but to State OPA headquarters. Your local newspaper can give you the name and address of the OPA Administrator for New York, if your own board seems so uncooperative.

Incidentally, the clerk of your local board has no right to bar you from access to members of that board. You have the right to ask them to review the case in person with you. If they turn you down, they should show you how to make your appeal to the state board.

If they don't, report the case to an Elmira newspaper because justice is being denied you.

Maximum Prices Set On Used Washers

(Concluded from Page 1, Column 3)

sales to dealers, and $10.00 to $105.00 on sales to consumers.

In establishing the categories for the different price levels, OPA considered all major utility factors such as the size of wringer rolls, tub capacity and finish, motor power, agitator control and other functional or quality features.

These qualities have been so defined in the regulation that the average consumer or housewife can readily identify the class of any washer upon simple inspection. The responsibility in trade sales of determining the class or category rests with the retailer. In person-to-person sales, the category can be readily determined by sellers.

In event of a difference of opinion, OPA can be consulted. On all machines being sold, a tag must be attached, either by dealer or individual, showing the class into which the machine falls, the length of guarantee, if any, and the maximum selling price set by OPA.

If a washing machine is being offered for rent, a tag must state the maximum monthly rental rate.

Hardware Inventories Drop 48% In Year

NEW YORK CITY—Hardware inventories in the hands of wholesale dealers show a drop of 48% during the last 12 months in reports prepared by the Hardware Jobbers' Industry Committee for the War Production Board, and reported at a recent meeting of the group here.

The drop in inventories, which is a source of worry to members of the committee, registered throughout the year even after the majority of dealers added non-critical items to their stocks to balance the sales volume.

Trade representatives have asked WPB to make available materials for the manufacture of essential hardware goods so that stocks may be built up to a level allowing for an adequate line of repair parts throughout the country.

Fred S. Denison Dead; Pioneer Engineer For Minneapolis-Honeywell

MINNEAPOLIS—Fred S. Denison, engineering executive of the Minneapolis-Honeywell Regulator Co., died here last week at the age of 56.

Denison's career with Minneapolis-Honeywell, which started 35 years ago, was climaxed in 1940 when the National Association of Manufacturers' Pioneer award was bestowed upon him in recognition of his contributions to industry, science and invention.

The motors, thermostats, and heating devices invented and developed by Denison are, according to the company, as sound in principle today as they were many years ago.

Denison was made chief engineer of Minneapolis - Honeywell several years ago, and then consulting engineer for the sales and engineering departments. At the time of his death he was superintendent of the Lake Street Ordnance plant.

Carpenter and Kaske Win Promotions From Westinghouse Co.

EAST PITTSBURGH, Pa.—Election of George E. Carpenter as treasurer and assistant secretary of the Westinghouse Electric Supply Co. is announced by B. W. Clark, president. Mr. Clark also announces the appointment of John J. Kaske as assistant chief stores manager.

Mr. Carpenter, the company's general auditor since April, 1941, succeeds W. M. Dick, who resigned after 40 years of service.

Mr. Kaske was district stores manager in St. Louis for 16 years before his appointment as assistant chief stores manager. He previously was associated with the McGraw Electric Appliance Co.,

A sports enthusiast, Mr. Kaske was a member of the Missouri State Athletic Commission, twice president of the St. Louis Municipal Athletic Assn., and manager of the St. Louis A. A. baseball champions in 1930.

The new treasurer joined Westinghouse in 1923 as assistant auditor, and later was a traveling auditor.

It's Time to Tell About Refrigeration's *"Hidden Services"*

take BUTTER *for instance . .*

When Mrs. America tears eight precious Rationing points out of her Ration Book for a pound of butter, she little realizes that only because of Refrigeration is that butter made available.

Mechanical Refrigeration started working a week or even a month before, to successfully carry that butter safely to market, and to the dinner table. Refrigeration cooled the milk at the farm, kept it at safe low temperatures in great trucks moving across the highways to creameries and dairies, protected it through dairying processing, churning, packing, until the butter in final form was delivered to storage. There, under carefully controlled refrigeration again, the butter awaited distribution to Dealers' display cases and finally to the home refrigerator.

Most rationed foods are perishable, require accurately controlled DEPENDABLE Refrigeration to prevent spoilage and waste. A-P DEPENDABLE REFRIGERANT CONTROL VALVES are helping Mechanical Refrigeration perform this great task of food protection so vital to war today . . . Offering DEPENDABLE, supersensitive Refrigerant Control that keeps Refrigeration units operating efficiently with a minimum of service attention.

A-P Model 204 — Used in Farm Coolers and Home Refrigerators.

A-P Model 205 — Popular on Retailers' Display cases, Truck Units.

A-P Model 215 — Found in larger Commercial Cold Storage Refrigeration Units.

AUTOMATIC PRODUCTS COMPANY
2480 NORTH THIRTY — SECOND STREET
MILWAUKEE ✪ WISCONSIN
Export Department
100 Varick Street . . New York City

AP DEPENDABLE Refrigerant Valves

HEAT EXCHANGERS - Suction Line

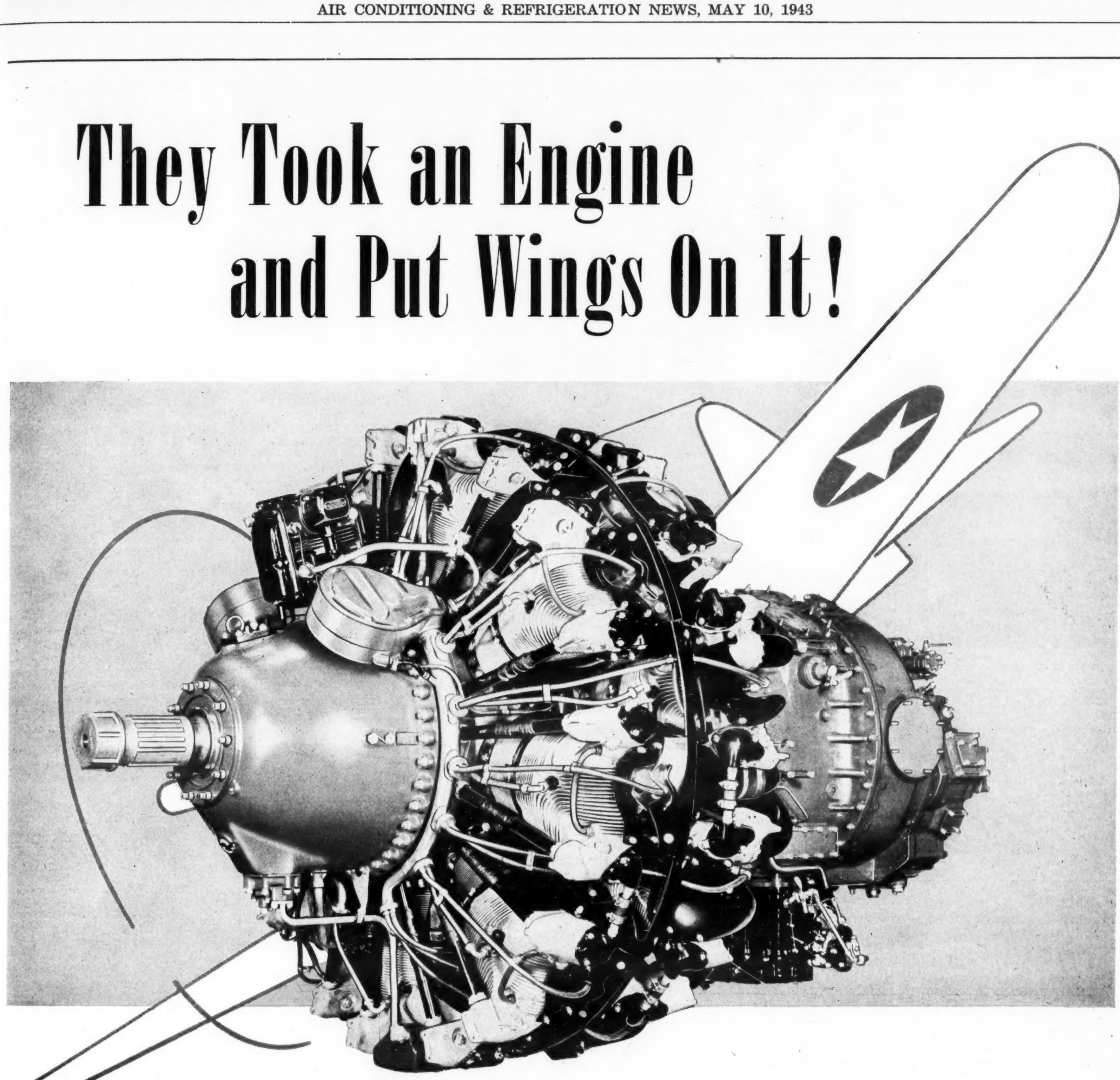
Sixteen Standard Sizes
Up to 180 Tons
Write for Catalog No. 12

Increases expansion valve capacity . . . prevents line vibration and chattering valves . . . often increases compressor capacity . . . prevents liquid return to compressor . . . eliminates suction line sweating.

ACME INDUSTRIES • Jackson, Mich.

ACME PRODUCTS

They Took an Engine and Put Wings On It!



YOU are looking at a closeup of one of the world's mightiest naval aircraft engines — the great 2,000 H.P. Pratt & Whitney Double Wasp!

Heart of the Navy's pride—the carrier-based *Corsair* fighter—this engineering masterpiece is built by Nash-Kelvinator!

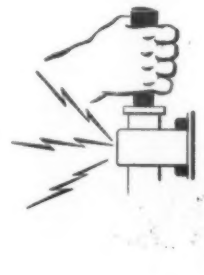
Around this mighty power plant the engineers of Chance Vought designed a fuselage—added just enough flight surface to give it a grip on the sky—and thus they produced the fastest-flying, fastest-climbing, carrier-based plane in the world! Literally little more than an engine with wings and a battery of blazing guns!

With eighteen radial, air-cooled cylinders, a high-altitude supercharger, and more than 10,000 separate parts, this great flying engine, built by Nash-Kelvinator, is a miracle of precision workmanship!

Yes, this is Kelvinator's wartime model —and we are proud to be entrusted with the production of war models like these. And we are proud, too, that the Kelvinator tradition of precision workmanship is now being recognized on the far-flung battlefronts of the air, as it is in the homes of America.

• • •

It is significant that the Kelvinator Polarsphere Sealed Unit—which we believe is the most trouble-free refrigerator unit in the homes of America today—was built to the same exacting standards required in the production of this mighty Corsair engine.



SCRAP IS POWER

Cooperate With Your Industry!
Salvage All Inoperative Parts Containing Critical Materials...
Put Vitally-Needed Scrap Back Into the Scrap TODAY!

LOOK AHEAD WITH KELVINATOR

DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT, MICHIGAN

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)

Divergent Philosophies

Of course none of this has anything to do with the price of potatoes. But we have no doubt which one the American public would vote for in a show-down.

Galbraith is a dubious scientist in a dubious science. He is honest and sincere, but he not only has no notion of how the American mind works, but doesn't seem to give a damn.

Maxon is as American as ham-and-eggs. He is probably unscientific as hell, but he knows "how to win friends and influence people" — although probably nothing in his experience has ever given him a clue to the successful dealing with bureaucrats.

As spectators we may never see the blows that are being struck in this battle, but by following the OPA orders and the language they are written in we can learn who is winning.

Maxon believes that rationing is "sharing." The other side would make it planned privation. Which one do you favor?

70 Years Old

The determination of a 70-year-old war production worker to postpone his retirement and stay on the job making parts for the cargo vessels of the Victory Fleet has been recognized in a letter of personal commendation sent to him by the Chairman of the United States Maritime Commission.

Seth Hershey, who operates a turret lathe at the plant of the York Ice Machinery Corp., was making his plans to retire when Japanese bombs fell on Pearl Harbor. Those bombs changed his plans and he volunteered to work 10 hours a day, seven days a week, until victory is won.

Admiral Emory S. Land, Chairman of the Maritime Commission, said in his letter to Mr. Hershey: "The eventual defeat of our enemies will be due largely to the courage and unselfish devotion to duty of men and women like yourself who are putting aside personal considerations because their country needs them."

Mr. Hershey is rounding out the 34th year of his race with a machine —a race which has helped him set a production record in two world wars. He has operated the same turret lathe since 1909 to produce nearly half a million finely machined parts which together would weigh more than 1,800 tons. The parts are used in refrigerating systems for merchant vessels and fighting ships. The man and his machine did much the same work in the last war.

So far, Seth Hershey and his machine are even in what the aged machinist likes to think is a production race to see which will last the longer. During the 34 years they have worked together, Seth has had only one lengthy illness and the machine has had but one long breakdown. Seth's illness occurred five years ago when he broke his arm in a fall, and in 1938 his machine was shut down for two weeks for overhauling.

"If it hadn't been for Pearl Harbor, I'd be finished with work and taking it easy now, except for a little hunting and fishing in the summer and fall," the 70-year-old worker says. On Dec. 7, 1941, he recalls, he gave up his plan for retiring and decided to stay on the job until the war is won.

Shortly after his 69th birthday, he sold his favorite hunting gun "because he didn't have any more time for it" and volunteered to work a 10-hour day, seven day week, for as long as necessary.

Since America entered the war, he has lost less than 10 working days, all of them the result of minor illnesses.

On the job, Seth Hershey asks no quarter because of age or seniority. Work records prove his output is equal to any employe in the shop. His only request is that he be allowed to continue working on the machine he took over when it was first brought into the plant in 1909.

Actually, the veteran employe has been on the job during three wars. He came to work for York in 1898 as a machine shop helper and then left the company in 1900 for a total period of eight years, during which he tried running his own farm.

Seth Hershey and five generations of his family have been natives of York county. He likes to think that his dollars as well as his machine are doing an outstanding production job. Last year he invested more than his total income in war bonds out of savings, and in addition to that, has 10% of his salary deducted on the payroll plan.

'People Who Give a Damn'

Copy for this advertisement (for Crowell-Collier) will bring a grim smile to many a reader of the NEWS. It describes well the life they are now leading:

"He arrived in Pittsburgh pretty tired after three successive nights in a Pullman upper berth.

"The assignment was to find 12,000 valves, three weeks overdue. He took a bus out to the valve shop, found the order waiting for valve stems. By long distancing Bridgeport, Conn., he learned that stems would be sent Saturday; also that a pump factory in Pittsburgh had some.

"He sold the pump factory on loaning him some stems until Saturday, carried them back to the valve shop, got the shop manager to start men assembling valves. Dinners with the shipping clerks and two pints of rye, got the valves packed after dinner. He rode the truck to the express office, stood around until the valves were loaded on the car—then to the William Penn for a night's good sleep.

"The hotel had his reservation. Also a telegram—'Soandso slipping. Urgent you be in Buffalo tomorrow.'

" 'Can I get a compartment, section, lower—anything but an upper—to Buffalo tonight?'

"The porter phoned, and waited, and argued. 'Only uppers left on the midnight, sir,' he said.

"George Enderby groaned, and took the upper. On the way to the train he looked over the newsstand. 'New American Magazine out! At least I'll have something worth while reading tonight.'

"George Enderby used to be the star salesman for an electrical appliance distributor in 1941, made almost $20,000 that year. The distributor is out of business. His star salesman is now an 'expediter' for an armament company, at $100 a week. His job is to break up bottlenecks, push production on urgent parts, find materials, speed up shipments.

"He uses all the psychology he ever knew, all the tact he ever had, on tough guards, over-worked plant managers, production men, machinists, railroad men. He has learned to find his way around dirty industrial districts, stock warehouses and rail yards. He has even learned to find his way around Washington.

"Making sleeper jumps, living out of a suitcase, eating in cheap lunchrooms and factory cafeterias at all hours, his private life has become a fond memory and a future hope. With good luck, he spends every other weekend at home.

"Out in Winnetka, the upper floor of the Enderby house has been shut off all winter. Mrs. Enderby has learned to make one dollar do the work of four, is her own housekeeper and laundress, and now goes to the grocery herself rather than phoning. And the Enderby kids walk to school, have less spending money this year."

Winning the War

How American industry has achieved the impossible in achieving astronomical production of war goods in incredibly short time is a story of little things. We have published many stories of these examples of ingenuity, and hope to publish many more.

As a pump primer, we submit these items culled from the latest Report to Stockholders of the General Motors Corp.:

Of the 565 parts in the Oerlikon Automatic Anti-Aircraft Cannon, as manufactured by Pontiac, 409 have been redesigned or reprocessed. Results: Production man hours reduced 50%. Simpler, more efficient operation.

Cadillac craftsmen designed completely new machines for producing a complex super-charger rotator vane, effecting important savings in time and material. Time per piece reduced from 125 to 10 man hours. Material saved, 496,000 pounds per year.

At Buick, a newly designed electric welding machine makes it possible to speed up welding of Diesel engine crankshaft balancers from three to 36 per hour.

Chevrolet engineers have developed satisfactory substitutes resulting in savings per 100,000 military vehicles of: 5,000,000 lbs. rubber, 1,200,000 lbs. nickel, 500,000 lbs. copper, 200,000 lbs. chrome, 125,000 lbs. latex, and 70,000 lbs. tin.

Harrison Radiator Division now builds for the Army, oil coolers of brazed steel, replacing copper tubing, to save 64% of copper used and provide better performance — stronger construction.

GM Divisions are successfully salvaging thousands of damaged tools thus helping to relieve shortages in tool material and tool making capacity. For example, broken drills and reamers formerly discarded are now being brazed together with silver solder and restored to full usage.

Oldsmobile method of machining on four selected operations in aircraft cannon production made it possible to:

1. Do the job with eight machines instead of 64.
2. Save $228,800 in machine costs.
3. Cut $12.65 in cost per gun.
4. Save 11½ production hours per gun.

Important savings in vital tool steel are being made throughout General Motors by methods similar to the following at Delco Products Division: One tool formerly made from a solid block of high vanadium high-speed steel is now produced by welding a thin strip of tool steel to a block of low-grade steel. Saving, 93% of tool steel originally required.

Previously drawn from brass and then nickel and silver plated at Guide Lamp Division, headlamp reflectors are now drawn from less critical steel, enameled and coated with vaporized aluminum. Metal used per 100,000 military vehicles:

Old Type	
65,000 lbs.	copper
32,000 lbs.	zinc
275 lbs.	nickel
160 lbs.	silver
New Type	
78,000 lbs.	steel
5 lbs.	aluminum.

Multiple drilling replaces single drill operations at Fisher Body Division. Saving, five hours production time per tank.

The Machine For Your Next Job...
If it's a refrigeration job ...no matter how big or how small...we can supply Lipman equipment to fit the specifications. Let us work with you.
GENERAL REFRIGERATION DIVISION
Yates-American Machine Co.
Dept. AC-3, Beloit, Wis.
Model 153 Water-cooled Machine
Lipman

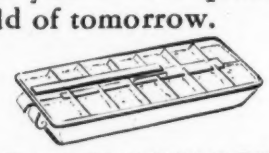
For a Full and Abundant Tomorrow—

Like so many others, we of Inland are working and thinking and investing for Victory today—and a full and abundant world of peace tomorrow.

Our wartime "know-how" has been well-earned and hard won. It has included many important laboratory and manufacturing contributions to new products and processes of war production.

It has included the speedy mastery of new skills and methods, new machines and materials by several thousand Inland men and women.

Yet the value of Inland's "know-how" will not end with our record-breaking production of war weapons. Rather, it is but a measure of our greatly increased ability to serve you in the peacetime world of tomorrow.



INLAND MANUFACTURING DIVISION
General Motors Corporation *Dayton, Ohio*

Illustrated is one of the series of Inland designed posters appearing throughout our plant and the plants of our numerous sub-contractors as part of our war production drive activities, which has helped our employes Beat Their Quotas of production for—

VICTORY WORK BY INLAND

Enlisted for Victory are the following products of Inland's Laboratory Controlled Manufacture: carbines; plastic helmet liners; tank tracks, clutches; Army truck clutches, brake linings; gun sights, shoulder rests; Army and Navy aircraft steering wheels; Marine engine motor mounts; parts for airplane motors, torpedo boats, submarine chasers, landing craft and artillery lighters.

INLAND
INLAND MANUFACTURING
Rubber, Metal, Plastics

SHERER VEGETAIRE

Limited Number Available Without Priority For Immediate Shipment

Finest produce case money will buy. Builds sales and profits for you. ***Write for franchise details.***
Also available—all types of reach-in refrigerators and walk-in cooling rooms for government procurement agencies.

SHERER-GILLETT CO., MARSHALL, MICH.

To England!

GEORGE MEEK

Mr. Meek, formerly of Carrier Corp., is being lent by the War Production Board to the Averell Harriman Mission in England, where he will remain for an indefinite period. He will be concerned with the establishment of uniform industry practices and conservation measures between the United States and the United Kingdom. Mr. Meek is a well known figure in the refrigeration industry, and has made a name for himself as a conservation expert in the WPB.

Vermont Groups To Seek Locker Plants

RUTLAND, Vt. — More than a dozen groups are either formed or in the process of organization throughout Vermont to build and operate new frozen food locker plants, according to announcement here April 23 by Peter Bove, attorney for several of the groups.

Bove said that Vermont communities in which interest either in cooperative or incorporated locker organizations was at the point of action included Fair Haven, Bellows Falls, Rutland, Montpelier, St. Johnsbury, Brattleboro, Windsor, Springfield, Hardwick, Randolph, Barre, Plainfield and Bennington.

Davison Chemical Net $1,084,431 In Quarter

BALTIMORE—Net earnings of the Davison Chemical Corp. for nine months ending March 31, 1943 totaled $1,084,431 after all charges and reserves for taxes, Chester F. Hockley, president and chairman of the board, reports. These earnings are equal to $2.11 a share.

Comparative figures for the same period in 1942 are $695,734, or $1.35 a share.

No provision has been made, the Davison executive says, for any effect on the earnings of the corporation which may result from government contract renegotiations nor for any special reserves or adjustments.

Hockley's report shows an increase in sales of 53% for the past nine months.

Golay Joins Field Staff of Kold - Hold

LANSING, Mich.—A. L. Golay has been added to Kold-Hold Mfg. company's territorial staff in charge of refrigeration application engineering and service beginning March 29.

Golay's territory includes Missouri, Iowa, Kansas, Nebraska and a part of Minnesota. His permanent location has not been decided upon as yet.

He joins the company familiar with Kold-Hold and industrial refrigeration through his recent connection with the Jaqua Co. of Grand Rapids.

Army Refrigeration Detail Continues Training on Duty

CAMP WHITE, Ore. — The 627th Quartermaster Refrigeration Company, first unit of its kind to be stationed here, has arrived. Capt. Richard J. Pollard, a former Philadelphia ice manager, is the commanding officer.

Maintenance of all equipment and administration of the company is done by Headquarters Platoon. Welding, electricity and refrigeration classes will be a part of the specialized training given to members of the company.

Refrigeration classes will be held at a nearby ice plant, while the cold storage group will study at the Camp White cold storage warehouses.

The Veterinary unit of the 627th, under the leadership of Capt. Albert A. Taylor, will have the job of inspecting GI food.

Gordon A. Mueller, Inc. New Metropolitan N.Y. Refrigeration Agency

NEW YORK CITY — Gordon A. Mueller, Inc., is a newly organized corporation here of manufacturers' agents for commercial, military, Marine, and industrial refrigeration sales and service, with Harry Traulsen as president; Frank C. Stehle as secretary; and Gordon A. Mueller as treasurer.

Mueller was formerly sales manager of commercial refrigeration in the New York City branch of the Nash-Kelvinator Sales Corp.

Traulsen is also the president of Traulsen Co. Both the Mueller and Traulsen companies occupy quarters at 45-20 38th St., Long Island City.

Stehle comes to the new company from the New York factory branch of the Seeger Refrigerator Co.

Ahlbrandt Is Midwest New Chief Engineer

GALESBURG, Ill.—J. Paul Ahlbrandt has been appointed chief engineer of Midwest Mfg. Co., the company announces.

Ahlbrandt was production engineer in the power division, Office of War Utilities, War Production Board, previous to his Midwest connection. Before his government assignment he spent eight years with Ingersoll Steel and Disc division of Borg-Warner Corp. of Chicago.

Ahlbrandt was educated at the University of Pittsburgh, Carnegie Institute of Technology, and the University of Cincinnati.

M-H Earned $681,621 In March Quarter

NEW YORK CITY — Minneapolis-Honeywell Regulator Co. reports a net income of $681,621, including an estimated postwar refund of $184,877, for the quarter ending March 31. This is eqqual to 71 cents a share on 621,900 shares of common stock, after preferred dividends, but before the postwar refund, and $1 a share after adding such refund.

For the same period last year, Minneapolis - Honeywell reported a net income of $669,931, or $1.01 a share, but it is not directly comparable as provision for Federal income and excess profits taxes for the three months ending on March 31, 1942 was based upon the Revenue Act of 1941, and no provision was made for renegotiation until the end of the year.

Our service on all properly rated orders will surprise you. Prompt shipments, parts, supplies, tools, tubing.

TED GLOU
CENTRAL SERVICE SUPPLY CO.

409 E. Jefferson St., Syracuse, N. Y. Phone 5-4000
209 Jefferson Ave., Scranton Pa. Phone 3-4000

INTO THE DAWN

TODAY ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆

roar these giant planes with their tons of death-dealing bombs, their powerful machine guns, and their highly skilled crew. Maybe a Nazi munitions factory or a vital railway junction will be the target for today.

Delicate instruments and accurate bomb and gun sights must function perfectly if the mission is to be successful.

One way in which our armed forces keep fine instruments in adjustment and working smoothly is by keeping them in air conditioned store rooms when off duty. This keeps rust and corrosion from destroying fine watch-like balance and assures perfect operation at a moment's notice. This is but another important contribution that the refrigeration and air conditioning industry is making to Victory.

TOMORROW ★ ★ ★ ★ ★ ★ ★ ★ ★

This same technique of air conditioning will be applied to the protection of all types of equipment subject to deterioration in storage, delicate parts for radio, television, and other undreamed of electronic devices. Better utilization of materials with less waste will result from the manufacture and storage of myriads of products in completely air conditioned factories.

Refrigeration will play an ever-increasing part in our daily lives, contributing in countless ways to the health, comfort and well-being of the Nation.

• • •

"Detroit" Expansion Valves and Controls are doing their bit in the program for Victory on land and sea. There is a "Detroit" product which can be adapted to your needs in the fields of refrigeration of foods, air conditioning and industrial process control. Several "Detroit" refrigeration controls are also expressly made for use on our fighting ships and merchant marine. If you are in need of this type of equipment we are ready to give you every service.

DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Division of American Radiator and "Standard" Sanitary Corporation

Canadian Representatives—Railway and Engineering Specialties Ltd., Montreal, Toronto, Winnipeg

350-Ton System Is Used in Producing Synthetic Rubber

BAYWAY, N. J. — Production of synthetic rubbers and important solvents is made possible at the Bayway, New Jersey, refinery of Standard Oil Co. of New Jersey by two Carrier centrifugal refrigeration machines installed recently.

Of 350-ton cooling capacity each, the centrifugals supply the cooling needed in the manufacture of Isopropyl Alcohol, Butyl Alcohol and Di-Trimer Polymer, which are made from petroleum by the use of low temperature.

The alcohols are converted into acetates and ketones which are widely used as solvents and thinners for lecquers, synthetic resins and varnishes. They also are used as solvents in special chemical processes.

The Di-Trimer Polymer forms the base stock for the manufacture of certain synthetic rubbers and rubber-like substances which play an important role in the manufacture of bullet proof airplane fuel tanks and high grade aviation oils. The Di-Trimer Polymer also provides the base stock for manufacture of heavy duty engine oil inhibitors, which prevent oil from sludging or oxidizing. This also lowers the freezing point of the oil.

In the same plant air conditioning equipment also serves in the rubber laboratory, providing consistent temperature and humidity conditions for tests of the tensile strength of synthetic rubber.

Seamon To Chairman Chicago ASRE Section

CHICAGO — Ben E. Seamon of Westland Engineering Supply Co., Chicago, was elected chairman of the Chicago Section of the American Society of Refrigeration Engineers for 1943-44, and was installed by retiring chairman, Harry Phillips, at the society's annual dinner meeting held in the Drake Hotel, April 15.

Seamon was presented with the Honor Scroll and other gifts by members in attendance in appreciation of 20 years' service to the society.

Other officers elected for the same period are: Vice-chairman, Professor Burgess H. Jennings, Northwestern Technological Institute, Evanston, Ill.; vice-chairman, William S. Bodinus, Carrier Corp., Chicago; secretary and treasurer, Clarence Sieben, chief engineer, Sieben Brewery, Chicago.

Following the election of officers, retiring chairman Phillips was given the "past chairman key," a token customarily presented to the Chicago Section's past chairmen.

In acknowledgement of valuable assistance on photographic publicity for the section, Herman Goldberg was presented with a membership key.

Chapin Roberts of Sears & Roebuck Co. who, as speaker of the evening, talked on "Air Conditioning in Sears & Roebuck Stores," discussed different types of installations operating in their stores throughout the country.

He covered several phases of air conditioning; refrigeration capacities, temperature and humidity in different parts of the U. S., maintaining proper balance, and operating costs. "Operating costs" proved to be of such interest to the audience that a suggestion was made to have this data published for use by society members.

Weatherhead Is Host To Cleveland ASRE

CLEVELAND — The Cleveland Chapter of the American Society of Refrigerating Engineers held its regular meeting in the cafeteria of the Weatherhead Co., Cleveland, April 20. H. D. Andress, chairman of the Cleveland section, conducted the meeting.

R. P. Gibson, industrial sales manager, James Strachan, refrigeration sales manager, and A. L. Lennox, sales engineer of the Weatherhead Co. were hosts for the company.

Following dinner, Charles Segal of the Kramer-Trenton Co., Trenton, N. J., described the Kramer balanced loader system. A model refrigeration machine was shown in operation first without, then with this system.

The group, numbering over 50, were conducted on a tour of the Weatherhead plant, and shown how Weatherhead packless valves and refrigeration dryers and strainers are manufactured. Each was given a copy of the Weatherhead Pictorial Review of 1942.

Al Chadburn, assistant secretary of the national A.S.R.E., was a surprise visitor of the evening.

Refrigeration and Air Conditioning As a War Production Tool

By L. W. Clifford, Sales Development Section Supervisor, Westinghouse Electric & Mfg. Co., East Springfield, Mass.

Storage of Army Film

The enormous amount of photographic film which is being used, both for documentary and propaganda purposes, wherever our armed forces are in training or in combat, has created a great need for proper film storage facilities.

Film, both unused and developed, unless stored under favorable conditions of temperature and relative humidity deteriorates rapidly. It loses pliability, will not lie flat and becomes foggy and streaked. Also, the film must be kept free from dirt and dust or, through repeated showings, scratches develop and clarity is lost. Fire hazards are also to be guarded against due to the inflammable character of film.

One manufacturer of film has advised that, for unused film, a storage temperature of 50° F. is ideal. However, the film should be removed from storage and allowed to come up to room temperature at least 24 hours prior to use to prevent "sticking" in the camera.

For exposed and developed film the recommendation is 60° F. and 50% relative humidity. For acetate film a slightly higher relative humidity is recommended.

At an Army Air Force base a compressor and aquamiser have been installed to be used with auxiliary equipment in maintaining ideal storage conditions in the film storage.

Design of Newest Aircraft Test Tunnel Helps Lower Temperatures To — 67° F.

WRIGHT FIELD, Ohio—In a 600-mile gale and at 67 degrees below zero the Army's new bombers and fighters will be tested on the proving ground here in elements synthetically perfected to reproduce the stratosphere.

Testing will take place, engineers say, in an "O" shaped tunnel 600 feet long, refrigerated to stratosphere temperature.

Freezing blasts of air traveling at six times the speed of a hurricane will strike engines, landing gears, and working models with enough force to shatter a brick wall, and will test the performance of parts in exactly the same stratospheric conditions as exist at an altitude of 40,000 feet.

To produce the 600-mile gale, a 40,000 hp. motor will be operated. As the wind travels around the first turn in the tunnel it will pass over a network of cooling coils chilled by as much as 8,000 tons of refrigeration. To simulate altitudes 40,000 feet and above, the temperature at the cooling coils will be 7 degrees below zero. It will drop to 67 degrees below zero by the time the air stream reaches the throat.

Parts and models to be tested will be placed by the engineers in the steel test compartment of the tunnel throat, the door will be tightly closed, and the engineers will make their observations through port holes. In these tests air pressure will be reduced to 2.7 pounds per square inch, simulating true stratosphere pressure.

J. G. Bergdoll, Jr., chief engineer of York Ice Machinery Corp., states: "A man in ordinary winter clothing could survive only a few minutes if he were placed directly in the path of the refrigerated air stream. Even if his body could withstand the 600-mile force of the gale, he would be frozen stiff in a few minutes."

In discussing the principle of the temperature drop, Bergdoll says, "In the new wind tunnel, temperature of the air stream drops naturally from 7 degrees below to 67 degrees below as the tunnel narrows down from its widest part in the center to the smallest opening at the throat. This narrowing has the effect of transforming static into velocity pressure. It actually lowers the pressure while the speed of the gale is increased resulting in a terrific temperature drop without the need for additional refrigeration equipment.

The giant motor, largest of its kind in the world, drives two 40-foot fans, each with 16 blades. Each blade has a driving force of 200 tons to push the air stream toward the cooling coils.

Tanks of calcium chloride solution will be cooled for 20 hours before each test, the engineer said. This solution, chilled to 40 degrees below zero by two giant refrigeration machines, will then be circulated through the coils in the tunnel.

Although Wright Field is equipped at the present time with a wind tunnel, its velocity is only 400 miles an hour and it is not refrigerated. The new tunnel will be located adjacent to the old one.

Place of Freezing Operations in Drying Blood Plasma Outlined To A.S.M.E.

DAVENPORT, Iowa—The value of refrigeration in the preservation of blood plasma entered into a discussion of plasma drying methods at a meeting of the American Society of Mechanical Engineers held here recently.

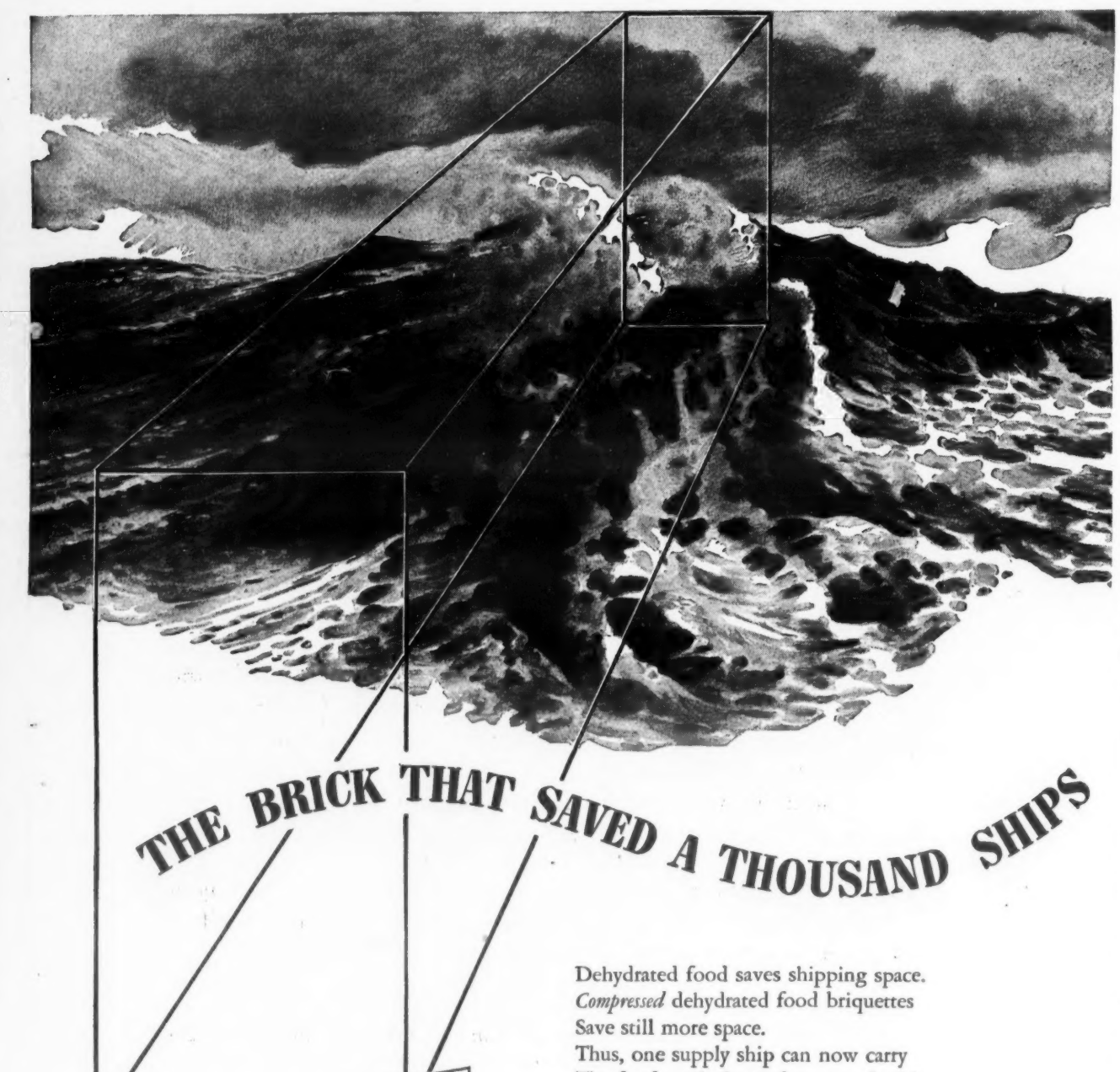
"Blood can be kept from 10 days to two weeks if maintained at a temperature slightly above freezing," David C. Pfeiffer, an industrial engineer from Dallas, Tex. who led the discussion, brought out. If kept longer, however, the cells burst rendering the blood unfit for use, he explained.

Whole blood cannot be frozen because of the presence of the cells. Only plasma, or the liquid content of blood, can be frozen. Minus the cells, this frozen mass will keep until needed when it is then thawed for use.

Plasma, because of the absence of cells, can be kept in a liquid, frozen, or dried state. While freezing provides the easiest method involving the least equipment, it calls for constant refrigerating and storage facilities not always to be found in shipping accommodations and in doubtful points of destination.

Although desiccating from the frozen state is one of the more expensive processes, the present program calls for the maximum quantity of dried plasma for our Forces regardless of cost, Pfeiffer stated.

Some of the desiccating methods now being used, he believes, "will undoubtedly find their place in the foods field, being limited primarily to more expensive foods, where the higher quality product will justify the additional cost of dehydration."

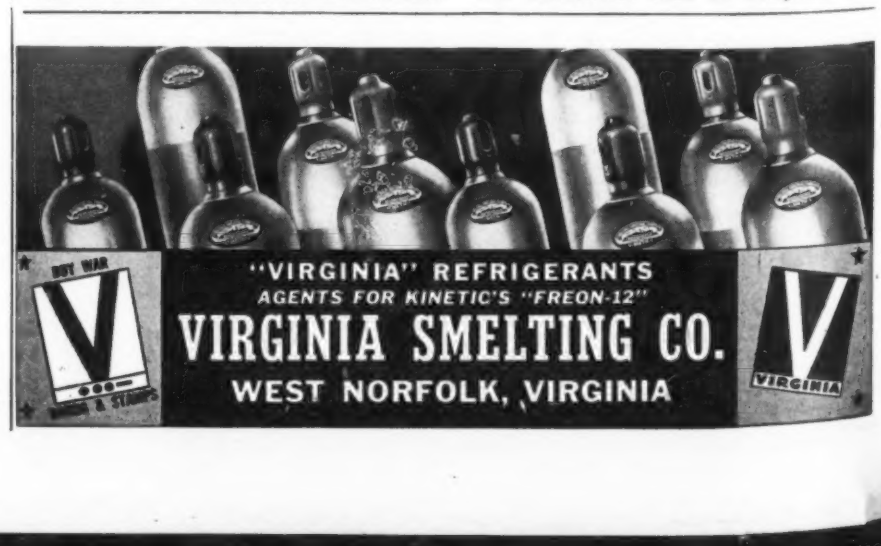


THE BRICK THAT SAVED A THOUSAND SHIPS

Dehydrated food saves shipping space.
Compressed dehydrated food briquettes
Save still more space.
Thus, one supply ship can now carry
The food equivalent of ten supply ships . . .
And each ship can provision ten times
As many soldiers as ever before.
Air conditioning and refrigeration equipment
Makes possible these dehydrated food bricks . . .
Dependable and efficient cooling equipment
Provided by General Electric. After the war,
When air conditioning and refrigeration
Will again become available to the public,
Take advantage of G-E experience
In the fields of air conditioning and
Commercial and industrial refrigeration . . .
Turn to General Electric.
Air Conditioning and Commercial Refrigeration Department, Division 435, General Electric Co., Bloomfield, N. J.

Helping G-E Distributors and Contractors is the purpose of G-E advertising now appearing each month in Time, Newsweek, Business Week and 20 industrial publications. Featuring new and essential wartime applications of air conditioning and industrial refrigeration — as in the ad reproduced here — these messages are blazing a trail to thousands of new prospects in hundreds of manufacturing fields.

Air Conditioning by GENERAL ELECTRIC



Further Studies Show Air Control To Be All-Important In Air Sterilization

Constant Relative Humidities Are Found Necessary For Thiethylene Glycol Vapors To Be Effective

NEW YORK CITY—Rate at which air is changed in a building to maintain an even degree of humidity is the controlling factor in the results obtained from the use of triethylene glycol vapor, killer of air-borne bacteria, Dr. Oswald H. Robertson, professor of medicine, University of Chicago, announced last week.

In a lecture before the Harvey society of New York, Dr. Oswald made public the details of his discovery that glycol compounds in vapor form of one part glycol to 200 million parts of air will sterilize the atmosphere in buildings where humans gather and, under proper humidity, will in a matter of seconds destroy germs of pneumonia, streptococcus infection, influenza, and perhaps the common cold.

Effective use of the vapor sterilization technique, Dr. Robertson said, will depend on engineering methods of obtaining correct humidity. When there are frequent and large changes of air in a building, the control of humidity and concentration of the glycol is rendered more difficult.

Infection is spread in droplet form by sneezing and coughing. The humidity of the atmosphere is necessary to keep the bacteria surrounded by their fluid, because the triethylene glycol molecules, with a high affinity for water, accumulate rapidly around the fluid and "smother" the bacteria by stopping their respiration.

If the bacteria are allowed to dry, the vapor is ineffective except at relative humidities of 35% or higher, which causes hydration of the bacteria and permits the glycol action. Hence, Dr. Robertson explained, dried bacteria may require 15 to 30 minutes to become hydrated and thus susceptible to the killing action of the vapor.

Relative humidities of 40 to 60% are the most effective in the sterilization process, he pointed out, although relative humidities as low as 35% will do the work. At higher humidities, triethylene vapor will sterilize the atmosphere almost instantly.

Dr. Robertson's experiments have demonstrated that this chemical is harmless to human beings. After exposing humans as well as cats and monkeys to air saturated with triethylene glycol for periods of several months, no harmful effects were noted in the bronchial tract, kidneys, or liver. Ethylene glycol and diethylene glycol vapors, he stated, are considered injurious.

A pound of triethylene glycol, which wholesales for about 22 cents, is sufficient to sterilize a room 800 cubic feet in size for three months, and is not inflammable.

Air Conditioning Dealer Develops Unit To Test Crystal Radio Sets

Provides Conditions Found At High Altitudes

KANSAS CITY, Mo.—An unusual hobby for an air conditioning contractor — development and improvement of aircraft and other radio transmission—has gained a good deal of attention for R. E. Meeker, head of the Temperature Engineering Corp. here, turned his inventive mind during the past two years to the possibilities of refrigeration in testing radio equipment.

His most recently patented invention is a machine for testing and appraising sensitive crystal radio sets under extremely low temperatures—similar to those they encounter at high altitudes in military aviation.

The machine is a heavy cabinet of wood and metal with 8 inches of Dry Zero insulation, containing a complete low-temperature refrigerating unit, and space for several radio sets and their connections with outside switches. There is a 1-hp., two-stage refrigeration unit with a liquid subcooler condenser refrigerated from the second stage of the compressor unit. It will produce in a few moment's operation temperatures of 40 degrees below zero when required, and maintain this sharp-freeze temperature for as long as desired.

By such tests it is possible to determine the performance of the sets under conditions in which they are likely to be used in comfort activity.

In the center of the cabinet is a turntable arranged to bring the crystals being tested into contact at the rate of one per second. A sensitivity device outside registers the activity and frequency of the crystal for fixed channel radios. It is also possible to bring the cabinet to high heat to test them at the opposite end of the scale, according to Mr. Meeker.

Name Changed By Buensod - Stacey

NEW YORK CITY—The corporate name of Buensod-Stacey Air Conditioning, Inc. has been changed to Buensod-Stacey, Inc. by vote of the stockholders at a meeting held April 7, the management announces.

Air conditioning service was the sole function of the corporation originally but through its work on temperature control, Buensod-Stacey found it necessary to develop a heating and piping business in line with demands.

Over the past two years, due to war restrictions on air conditioning, the company has handled a large amount of heating, power plant, and process piping. The volume of heating contracts received led company officials to the conclusion that Buensod-Stacey is permanently in the heating business as well as in air conditioning and ventilation.

G. A. Dornheim, vice president, is in charge of the heating section.

Barbers Cooling System Of Cast-off Parts Keeps Customers 'For the Works'

MONTGOMERY, Ala. — When the DeLuxe Barber Shop here, large tonsorial parlor serving the downtown business district, installed an air conditioning system, the number of customers who remained for "the works" after a haircut immediately doubled, and the system has paid for itself in two months time.

The air conditioning system, made up of makeshift parts, an old 3-ton compressor, controls from half a dozen obsolete unit conditioners, etc., cost owner Al Brockmayer $250. Delivering three tons of cooling capacity over an area containing 11 barber chairs, a shoe shine stand and a hat cleaning counter, it made the shop so cool and comfortable that four of each 10 customers stay for tonic, massage and extra service, providing 50% more profit per customer than the man who wants only a hair cut.

The variegated equipment is installed in a shed at the rear of the DeLuxe shop, and despite its makeshift appearance, has required only cleaning of the condenser, draindown and start-up service since the first day. When the war is over Brockmayer intends to replace it with a large unit cooler at the rear of the store "so the customers can see what makes it cool!"

Connelly Co. Has New Springfield, Ill. Office

ST. LOUIS—Connelley Heating and Air Conditioning Co. announces the opening of its new division in Springfield, Ill.

W. R. Connelley has been named president of the Springfield company and Charles A. Fischer, vice president. Leo Morgan has been made sales representative.

Showroom, office, and warehouse are located at 609 East Washington St. in a building which was completely remodeled for the new Connelley company.

Smooth running — powerful — Chrysler Airtemp Radial Compressors are distinguished by their lack of vibration. The cylinder unloader keeps compressor automatically adjusted to load. Motor starts unloaded. Balanced radial cylinder assembly—short, dynamically balanced crankshaft—that's why you can balance a penny on the compressor housing at 1750 R.P.M. Shipped ready to run, this compact compressor can be installed, easily and quickly, almost anywhere. No special foundations are required.

For better war production—for long, trouble-free operation—install Airtemp Radial Compressors. Capacities —10 to 75 HP.

Send for your copy of "Chrysler Airtemp at War", which describes various war-time uses of Airtemp equipment.

FEATURES

VARIABLE CAPACITY CONTROL
UNLOADED STARTING
DIRECT CONNECTED
SIMPLIFIED INSTALLATION
NON-FLEXING VALVES
PRACTICALLY NO VIBRATION
NO SPECIAL FOUNDATIONS NEEDED
INTERCHANGEABLE PARTS
LIGHT IN WEIGHT

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AIRTEMP DIVISION OF CHRYSLER CORPORATION • DAYTON, OHIO

"Packaged" Units 3 & 5 H.P.—Direct Expansion and Water Cooling Systems—Commercial Refrigeration

How the Controlled Materials Plan Affects Refrigeration Jobbers

It's Primarily a 'Manufacturer's Order' But The Wholesaler Has Some New Things To Learn

By J. W. Krall, Manager, Refrigeration Division, Detroit Lubricator Co.*

Having been asked to discuss "CMP and What It Means to the Jobber," I think I should assure you at the outset that I shall make no attempt to define and explain the Controlled Materials Plan as a whole. I say this for two very good reasons —first, because I do not want to impose upon your patience, the second and more personal reason, because I am completely ignorant of the many details involved.

Human nature cannot be changed, consequently it is to be assumed that each of you look upon CMP realistically and are, therefore, primarily concerned with how it effects your business. Because of this, any reference to the manufacturer's problem under CMP will not be covered, except briefly, and then only insofar as it directly concerns the refrigeration jobber.

A Scheduling Device

What is CMP? CMP is primarily a scheduling device—an elaborate accounting system which makes it possible for the WPB to determine what types of goods and how many of each are to be produced from the available raw materials.

How does it do this? Representatives of the Armed Forces and various industries sit together on a committee, and decide amongst themselves the relative importance of every requirement for raw materials, and agree on the amounts that each representative will carry back to his branch or industry. Each member of this committee (Claimant Agent) then distributes the material he took away from the committee meeting to the manufacturers he is responsible for. These raw materials are passed out under a system called allotments.

Why was CMP necessary? CMP was necessary because the previous system (PRP) failed to provide enough material all the way down the line to always complete any one program. As a matter of fact, PRP was comparable to a hunting license. The manufacturer filled out the PRP form, and referred it to the WPB for processing. When processed and returned to the manufacturer, it constituted the right to go out and look for the amount of material granted. There was no guarantee that the material was there. The processed PRP merely gave you the right to look for it. As a result, by the time the little fellow who makes valves, screws and bolts got to his sources of supply they very often ran out of material, consequently planes, tanks and guns were without screws and nuts and bolts to put them together.

How does CMP correct this condition? CMP corrects this condition by treating one program as a whole and making the manufacturer of the big item—planes, tanks and guns, responsible for the raw material of his suppliers. When the manufacturer of airplane motors gets an allotment of steel, there is included in that allotment material for the small fellows who supply him with miscellaneous parts, such as special screws, nuts, bolts, etc. The large manufacturer passes out the raw material to his small supplier.

How does CMP affect the Distributor or Jobber? CMP is primarily a manufacturer's problem. He makes the applications for the allotments; he keeps the accounting as to the use of the raw materials; he passes out the allotment numbers assigned to him. The jobber has no worry as to those particulars.

The Allotment Number

The jobber will get allotment numbers and symbols on the orders originating from his customers. These allotment numbers amount to nothing more than an additional priority as far as the jobber is concerned. He should pass them along to his manufacturer the same as he now passes along preference ratings. The allotment number will look something like this: S-1-16. It will be in addition to the preference rating on fabricated items such as parts, valves, controls, etc.

Orders for raw material like copper tubing may show only the allotment number. The distributor is only interested in two important CMP regulations: CMP Regulation 4 and CMP Regulation 5. These set up certain procedures about the extent and use of allotment numbers on orders. Each jobber is urgently requested to secure a copy of these two regulations and read them carefully.

CMP Regulation 4 restricts the delivery of any steel, copper or aluminum raw material. Under this regulation the sale of copper tubing, for example, is restricted to orders bearing preference ratings of AA-5 or better or what is called "Authorized Controlled Material Order" which shows an allotment number. Further, a distributor may not sell more than 500 pounds of any copper or brass raw material at any one time, nor may he sell more than 2,000 pounds of any item of copper or brass to any one customer in any one month. This regulation also insists that purchasers of raw material under CMP Regulation 4 use a new certification which, of course, can be rubber stamped.

CMP Regulation 5 and 5A provide an allotment symbol and a preference rating to any person or organization listed in the schedules requiring items made of copper, steel or aluminum for the repair and maintenance of their own property. These orders will show a reference that will look something like this: CMP Allotment Symbol MRO—Preference Rating AA-1. The regulation assigns AA-1 to certain types of industries; AA-2X to others, and it is not difficult to understand and should be thoroughly studied by everyone.

Jobbers will also find new certifications showing up on orders. The CMP regulations have provided a whole new group of certifications which will be applied to appropriate circumstances. The one which will be seen most often will be certification under CMP Regulation 7, which may be used in place of any of the others, such as CMP-4 and CMP-5.

Same Old Forms Still Hold

The same old priority forms will still remain in existence and the same priority regulations must be followed. You will still receive ratings on PD-1H, PD-1X and PD-3A. You will still be required to keep records under M-63. You will still receive authorized emergency service ratings under P-126. All that CMP does for the jobber is to add a new bunch of priority references and a new lot of certifications to be passed along to the manufacturer.

In general, the position of the distributor under CMP has not received great and detailed consideration because of the fact it is primarily a manufacturer's problem. There are so many rough spots to be ironed out from the production standpoint that it may be some time before the dis-

(Concluded on Page 11, Column 1)

*Address before the National Refrigeration Supply Jobbers' Association at Chicago on April 13, 1943.

The Jobber Hears About 'Some New Rules'

J. W. Krall, manager, Refrigeration Division, Detroit Lubricator Co. (standing), explains to members of the National Refrigeration Supply Jobbers Association how CMP affects the wholesaler's operation. With him at the speaker's stand are Mary Silvers of the association's national office; Alex H. Holcombe, Jr., Philadelphia, retiring N.R.S.J.A. president; Sterling S. Smith, Chief, Refrigeration and Air Conditioning Section, WPB.

...Today's Developments in Refrigeration

To a military man, today's Universal Cooler developments guarantee protection for foods that become hearty meals. To Universal Cooler workers, present developments call for increased production and new engineering skill and ingenuity for meeting rigid war specifications.

But to a manufacturer of refrigeration equipment, today's Universal Cooler activity forecasts even greater leadership in dependable, automatic refrigerating units after Victory. An expanded, highly trained Universal Cooler research-engineering staff even now concentrates on further innovations. So we suggest that, when your planning reaches the point where you discuss the cold-making mechanism, you "consult Universal Cooler."

Typical Universal Cooler Refrigerating Unit specially-constructed for U. S. Army prefabricated cold storage warehouses, temporary and permanent bases, cantonments and mobile units.

UNIVERSAL COOLER

WE SELL TO MANUFACTURERS ONLY

UNIVERSAL COOLER CORPORATION • Automatic Refrigeration since 1922

MARION, OHIO • BRANTFORD, ONTARIO

Gilmer BELTS

With refrigeration and air conditioning becoming increasingly important to war industries, there's more room than ever for the quick, efficient service man.

That's where Gilmer Belts can help you. Their long life and hefty pulling power add up to customer satisfaction and good-will. Since they're still available, you can depend on Gilmer Belts to stand by you through the war-time trials ahead.

L. H. GILMER COMPANY

TACONY, PHILADELPHIA, PA.

Filtrine WATER COOLERS

Cafeteria Models

Self-contained Storage And Remote Types

Shipboard and Land Use for

Film Processing

Bakery Service

Drinking Water

Brine Cooling

War Industries

All Purposes

Complying with

Army and Navy Specifications

Immediate Shipment

Filtrine MANUFACTURING COMPANY

53 Lexington Ave., Brooklyn, N.Y.

Krall Asks Jobbers Not To Try 'Short Cuts' In Procedure When Entering an Order

(Concluded from Page 10, Column 5)

tribution of items is carefully considered.

Of great importance to the refrigeration jobber is how CMP protects industrial and civilian supply. Because of the tremendous advantage CMP would give military producers, several hundred items normally sold on an open market were set up and called "B Products." This class includes such component items as valves, bearings, instruments, screw machine products, etc. In general, these are items produced on an "Off the Shelf" basis.

What Are 'B' Products

Manufacturers of these "B Products" are considered under CMP in the same category as manufacturers of military end items and these manufacturers will receive allotments of their raw material requirements directly from the WPB. These "B Product" manufacturers will also be responsible for the distribution of raw materials required by any of their sub-suppliers. For example, a "B" manufacturer must furnish steel to the supplier of his springs, in exactly the same manner as a prime contractor of machine gun parts furnishes material to his sub-contractors. The production of "B" items, and this is important, will be scheduled in the same manner as tanks, guns, planes, etc., are scheduled. One of the members of the Requirements Committee of the CMP set-up is a representative of the Office of Civilian Supply. Most of the "B" products are handled by this office.

Jobbers and distributors are very much interested in the sale of items which are on the "B Product" list. The fact that these items are handled by the Office of Civilian Supply does not put them on any different level than military items. It is recognized by the WPB that the maintenance of healthy civilian industry is necessary to the production of military end items, and thus to the successful prosecution of the war.

That, very briefly, is the Controlled Materials Plan and how, in operation, it will effect you—the refrigeration wholesaler. There is actually very little to remember, because, as mentioned previously, it is primarily a manufacturer's problem as was PRP.

Jobbers, not only in refrigeration but in other industries as well, must during these times be dependent almost entirely upon their manufacturing sources of supply for the continued flow of products so vital to the operation of their business. During normal times practically any of your orders would have been enthusiastically and gratefully accepted and the material promptly shipped. The next day a salesman, now the forgotten man, would be calling on you with his hand out for another order. But times are different—those days are gone for the duration along with coffee, meat, sugar and butter, and all we have left are pleasant memories.

What an Order Must Have

An order, as such, is absolutely of no value unless it brings with it information and assistance requested by a manufacturer. We have always needed your cooperation—now your government demands it. Read very carefully all mail received from your sources, knowing that it must be important otherwise it would not have been sent during these busy days. And after reading, abide by the rules and follow them to the letter—with no "short cuts."

A slight omission of information requested may mean the difference between getting the material and not getting it. Clerical help, as you know, is at a premium, consequently it may be several weeks before you are reminded of your omission.

PRP or CMP priorities are still the order of the day. Do not be content with an AA-4 merely because it is more convenient for your customer to so certify. If a AA-2X or a AA-1 is available insist that you get it. A few days delay in placing your order will not materially effect the shipping date anyway, and if you get a higher rating the material will in all probability be sent sooner.

'Part For Part' Rule Now Applied To All Repairs of Radio Sets

WASHINGTON, D. C.—"Tube for tube" and "radio part for part" are the rules which hereafter will govern the repair of radio sets.

Limitation Order L-265, issued today by the War Production Board, requires that the owner of a radio set turn in an old part when he buys a new one or when a new one is installed by a repair man. It makes exception, however, for cases in which the return of a part is impractical.

In issuing the order, WPB officials emphasized that owners of radio sets need not secure priority ratings to replace old parts. In some localities repair men demand such unobtainable ratings in order to sell more expensive servicing.

WPB officials said that dealers should be able to supply tubes and other radio parts to their customers as old ones are turned in. It was pointed out that tube production, available for civilian radio maintenance, is close to peace-time levels. Existing shortages will be remedied as manufacturers concentrate production on types most in demand and, by exchanging tubes among themselves, round out their own stocks and those of their dealers.

The order makes allowance for rural set owners who can buy only by mail and for those who have lost the part which is to be replaced. Such a buyer must "certify that the part(s) specified on this order are essential for presently needed repair of electronic equipment which I own or operate."

The radio repair man or dealer must collect a part or certificate when he sells a part to a consumer, but need not pass that part along to his supplier. Instead, he must certify that he has collected either components of the kind being ordered or certificates for them. Such certification must be made both by the repair man who sells a part to an owner of a set and by the supplier who sells to a repair man or to another jobber. Dealers must take used parts to scrap heaps or salvage stations within 60 days of receiving them.

WPB officials pointed out that the dealer is free to develop his own bookkeeping system in balancing the receipt of parts and certificates against purchases. They stated that the order will be enforced through checks made in the field. Records of sales and purchases must be kept. In most cases, this will not require changes in bookkeeping practice, officials said.

The order applies generally to electronic equipment, radios and phonographs, but exceptions are made to permit the sale of entire radio sets, phonographs and sound motion picture projectors completed before today. Hearing aid devices, electric batteries and power and light equipment are not covered by the order. L-265 supersedes L-44 and L-44a, incorporating the prohibitions of those orders against the manufacture of new radio sets, phonographs and the like.

The order also supersedes L-183, which required a minimum rating of A-3 for transfers by manufacturers of electronic equipment, and raises this rating to A-1-a. However, purchases against parts or certificates do not require ratings. L-265 prohibits the manufacture of electronic equipment, except to fill orders of the Services, orders rated AA-4 or higher, or to the extent that the manufacturer has received his materials under the Controlled Materials Plan.

'Termination Clause' In War Contracts Sought

NEW YORK CITY—That a uniform "termination clause" for settlement of government contracts promptly at the war's close should be fixed now, will be proposed by the National Electric Manufacturers Association at the annual meeting of the U. S. Chamber of Commerce scheduled here April 27 to 29.

NEMA's proposal, developed by the committee on Termination of Government Contract Clauses, with four other proposals relating to contract termination, will be submitted to the Chamber of Commerce for discussion and action.

As reported in the C. of C. magazine, NEMA's proposed termination clause "should provide for immediate payment of the undisputed part of any amounts involved, and there should be immediate study to develop procedures with respect to general accounting principles, records, regulations, etc., to insure expeditious handling of all terminations and settlements thereunder when war ends."

Such procedures, Nema believes, should be placed in operation at the earliest possible moment.

Egmont Arens, top-flight New York industrial designer, knows whereof he speaks. An expert on plastics, he has set up a small autoclave (above) in his studio for research on plywoods, laminated fibres, cloth and pulp. He has applied for several patents on these constructions.

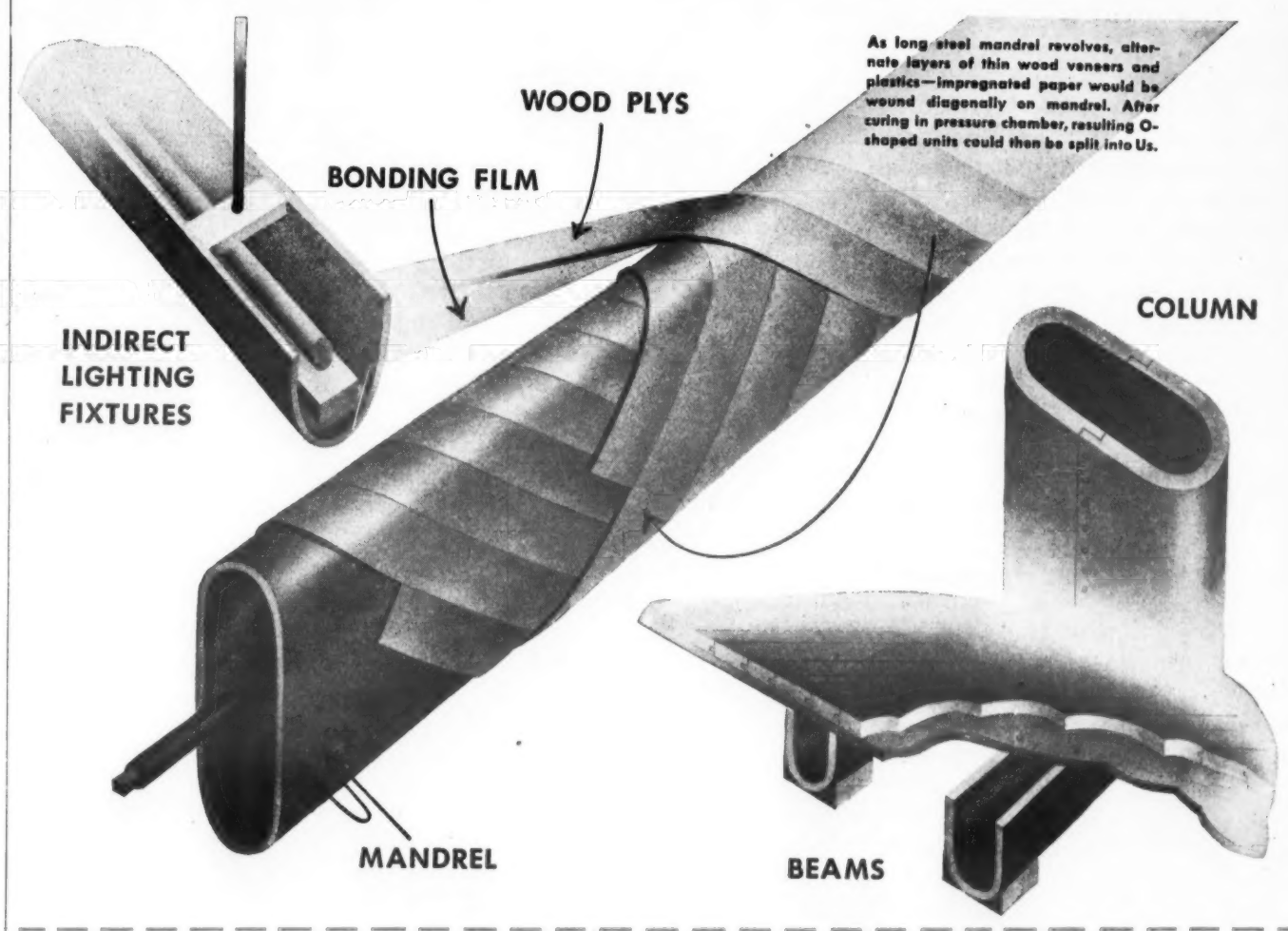
FROM THE HULL OF A PT BOAT... "ENGINEERED" LUMBER BY THE MILE?

TYPICAL of many wartime advances in plastics materials and techniques are the Navy's deadly PT boats — precisely formed today from large sections of lightweight, plastics-bonded plywoods.

Equally typical of much of today's creative thinking about how plastics can contribute to a better postwar world tomorrow is this suggestion from Industrial Designer Egmont Arens.

The PLYFOLD structural lumber he visualizes would be produced almost literally by the mile...in continuous line production... from plys of wood veneer and plastics-impregnated bonding film . . . wound transversely over an oval-shaped mandrel.

"Free from knots and flaws, PLYFOLD lumber could be built to exact engineering specifications with more uniform performance under load than dimension lumber," Mr. Arens points out. "It would have greatly increased strength for its weight, actually approaching steel or aluminum in strength per pound. Being permeated with plastics resins, it would be more permanent and much more resistant to warpage, rot or insect attack than lumber as Nature provides it."


As long steel mandrel revolves, alternate layers of thin wood veneers and plastics—impregnated paper would be wound diagonally on mandrel. After curing in pressure chamber, resulting O-shaped units could then be split into Us.
WOOD PLYS
BONDING FILM
INDIRECT LIGHTING FIXTURES
COLUMN
MANDREL
BEAMS

The Broad and Versatile Family of Monsanto Plastics

(Trade names designate Monsanto's exclusive formulations of these basic plastic materials)

LUSTRON (polystyrene) • SAFLEX (vinyl acetal) • NITRON (cellulose nitrate) • FIBESTOS (cellulose acetate) • OPALON (cast phenolic resin) RESINOX (phenolic compounds)

Sheets • Rods • Tubes • Molding Compounds • Castings • Vuepak Rigid Transparent Packaging Materials

MONSANTO PLASTICS

SERVING INDUSTRY...WHICH SERVES MANKIND

Postwar Plastics and YOUR Future

Perhaps you see no immediate tie-up between Mr. Arens' PLYFOLD and the products you hope to offer postwar markets. His suggestion is offered, however, as an indication of the vast new peacetime horizons which wartime advances in plastics materials and techniques will open up for scores of industries. Particularly, it illustrates the stimulating possibilities of new plastics in combination with older, traditional materials.

When the time comes to talk "future" in *your* shop you will find Monsanto, as one of the nation's largest producers of plastics, an excellent source of reliable information. MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield, Massachusetts.

WPB REVOKES GENERAL PREFERENCE ORDER M-219

Still-Rising Production ASSURES YOUR SUPPLY

GREATER CAPACITY 1½ to 2 times as much as other drying agents.

ACTS INSTANTLY

REMOVES ACIDS

WILL NOT DUST NOR POWDER

"It's a superior drying agent . . . does a superior job" . . . the consensus of service engineers and equipment manufacturers.

Production figures revealed that General Preference Order M-219 was no longer necessary. Once again, you have the opportunity to ask your jobber for Davco Silica Gel . . . and get it . . . as much as you need . . . when you need it.

Supplying the armed forces is still our major job. But you can be sure that no stone will be left unturned to see that your needed supply of Davco Silica Gel is available . . . your customers need the protection it gives their vital food supply.

THE DAVISON CHEMICAL CORPORATION
Industrial Chemicals Department
BALTIMORE • MARYLAND

ALWAYS ASK YOUR JOBBER FOR

Davco Accelerated SILICA GEL

Air Conditioning & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

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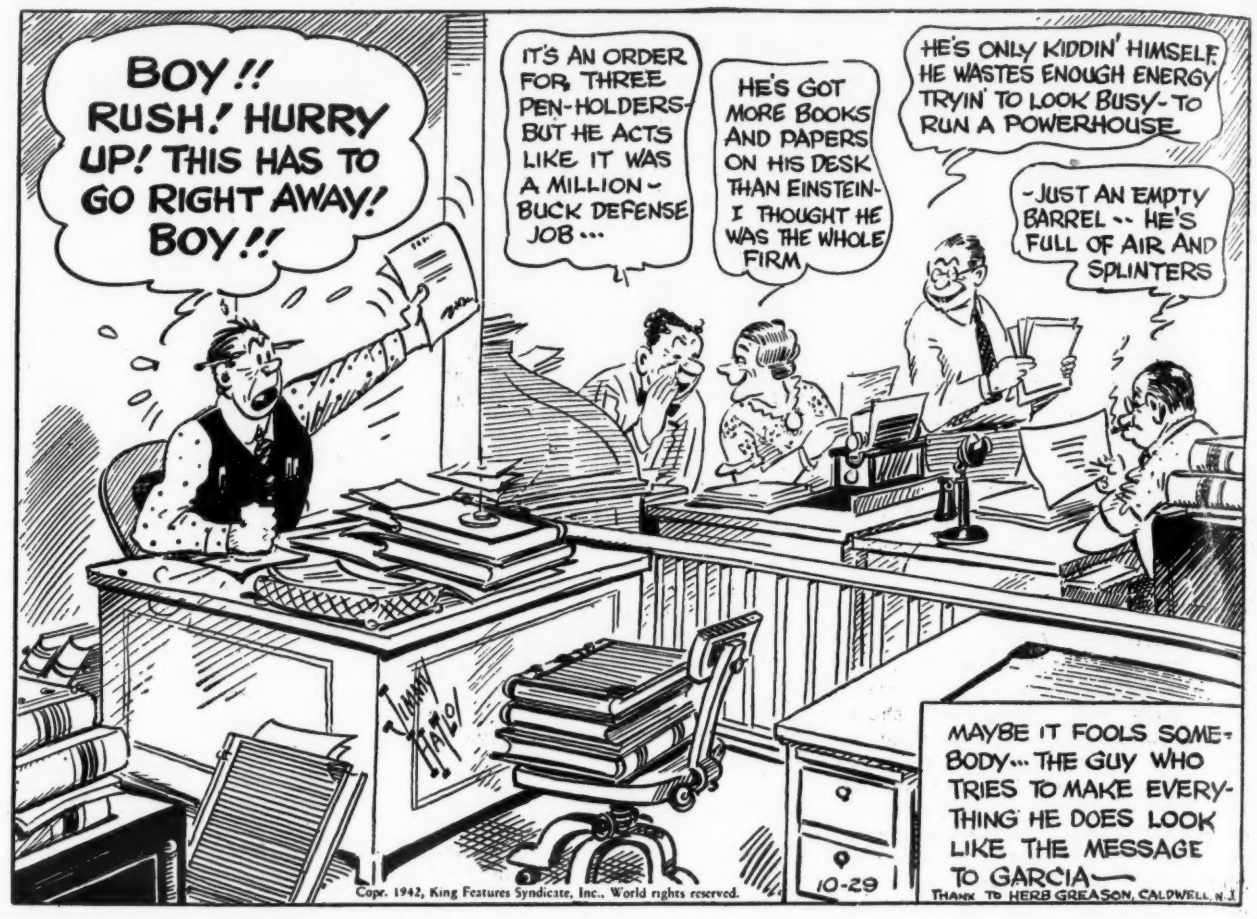
They'll Do It Every Time

By Jimmy Hatlo


BOY!! RUSH! HURRY UP! THIS HAS TO GO RIGHT AWAY! BOY!!
IT'S AN ORDER FOR THREE PEN-HOLDERS- BUT HE ACTS LIKE IT WAS A MILLION-BUCK DEFENSE JOB...
HE'S GOT MORE BOOKS AND PAPERS ON HIS DESK THAN EINSTEIN- I THOUGHT HE WAS THE WHOLE FIRM
HE'S ONLY KIDDIN' HIMSELF. HE WASTES ENOUGH ENERGY TRYIN' TO LOOK BUSY- TO RUN A POWERHOUSE
-JUST AN EMPTY BARREL -- HE'S FULL OF AIR AND SPLINTERS
MAYBE IT FOOLS SOMEBODY... THE GUY WHO TRIES TO MAKE EVERYTHING HE DOES LOOK LIKE THE MESSAGE TO GARCIA—
10-29
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THANX TO HERB GREASON, CALDWELL, N. J.

Will Production Taper Off?

CONVERSATION around the armament-producing factories in this industry is now much concerned with speculation over the possibility that orders for ordnance are likely to taper off in the near future.

Wild talk of wholesale plant closings, of widespread unemployment in certain arms production centers such as Detroit, is heard frequently. The pessimistic view this situation with the customary alarm; the optimistic see in it a chance to begin supplying civilian products sooner than they had anticipated.

What are the facts? Well, as nearly as we can correlate the results of patient investigation, the situation seems to be that we are far overproduced on some items, underproduced on others, and on some we shall never have enough.

In general, your plant is assured of sufficient orders for peak production if you are making:

(1) Aircraft parts and sub-assemblies
(2) Ship parts and sub-assemblies
(3) Valves, heat exchangers, and instruments
(4) Refrigeration equipment for Army, Navy, and war plants.

Production of the fourth group of items may slow up *next year,* although if we capture a lot of enemy territory it probably won't.

Production of the first three categories will never slow up so long as the war lasts, we learn on good authority. It simply seems impossible that the United Nations will ever get enough planes and ships. As one type becomes obsolete, two new ones will spring up ready for production. These categories will *expand.* Materials and labor will be diverted to them at a faster tempo.

If you are producing parts for tanks, guns, ammunition, or field equipment, you may expect a slow slackening of orders, and a reduced trend of business in 1944, *barring military set-backs.*

It is no secret that we have gigantic stockpiles of weapons piling up all over the land. We also have an army of at least 6,000,000 men at home with no prospect of immediate fighting. (Less than 60,000 American soldiers are said to be actively engaged in prosecuting the war.)

By the end of 1943 our supply of weapons and ammunition should be ample for all foreseeable needs, even with due allowances for loss in transport and battle losses. Only a fraction of our present production (exclusive of ships, planes, and new items) would then be needed to keep our war machine running.

How come? Why, if we have all this stuff, is MacArthur crying to high heavens for more materiel? The answer is (1) the shipping bottleneck and (2) the totally unexpected capacity of American industry to turn out engines of war.

We shouldn't get mad at the Army and Navy for ordering more stuff than they can use immediately, then. Rather, we should congratulate American industry on its miraculous job. Manufacturers have done in one year what they were reasonably expected to do in two.

How about the draft, then? Are recent slow-ups in the induction rate indicative of recognition that we now have a far bigger Army than is likely to see action within the next two years?

Authorities say: "No. The Army will be built to planned size, although it may be early 1944 before we reach it."

Why? The April 30 issue of the well-informed "United States News" states that "High officials are beginning to be concerned over the public reaction that will occur when it is learned that vast quantities of weapons are piling up in this country and not being put to use," and that there will be no reduction in the size of the Army because a "big army at home is needed to soak up vast quantities of war equipment."

One also hears that a change in the "top level" strategy of fighting the war has occurred. Instead of seeking a showdown with Hitler *this year,* we'll wait until 1944 or 1945, hoping that in the meantime bigger and bigger bombing raids and a tighter and tighter blockade will cause him to throw in the towel.

Political reasons may be back of this change in strategy, although there is the humanitarian purpose of saving tremendous casualties which our High Command believes would be involved in a *full-scale* invasion of fortress Europe this year.

In the meantime, our Navy and Air Force would be growing tremendously, and we could give more and more attention to Japan, instead of merely fending the Nips off until Hitler had been annihilated. All authorities seem to agree that the war against Japan will be an air and naval war.

All this—if true—would lead up to a gradual resumption of civilian supply production.

If, on the other hand, Europe is invaded this year and battle joined with the still formidable German war machine—and if we lick the submarine sufficiently to permit ample transport of men and weapons for a major land conflict in Europe—we might begin to eat into our backlog of arms and ammunition at a rapid rate.

To what do all these speculations add up? First, production of airplanes and ships will expand, so if you're not in that business, get in. Second, if you can't land aircraft or naval contracts or subcontracts, don't worry too much. Civilian supply production may take up where ordnance production tapers off. And . . . it looks as if the war may last longer than you may have expected.

LETTERS

MANPOWER FACTS

Refrigeration Products Co.
49 Central Ave.
Cincinnati, Ohio

Editor:

First a compliment and then a suggestion. You are to be congratulated on your excellent coverage concerning current rules, regulations, and trends in our refrigeration industry. Particularly helpful are the "down to earth" interpretations of the verbose government orders.

The most serious problem now facing this industry is, of course, that of manpower. In your recent April 12 issue considerable space is devoted to this subject and certainly every intelligent individual who avails himself of the facts will unhesitatingly agree that our repair work is essential. But the biggest problem which lies before all of us in this business is that of placing these important facts before the public.

Accordingly, it is my suggestion that future issues of the REFRIGERATION NEWS present on the front page, in a box that cannot escape attention, important steps in an overall plan of action which will accomplish this purpose. For example, in your editorial on page 18 under the heading, "Civilian Supply Needs a Champion," your last paragraph suggests that the NEWS audience write letters to Congress.

If this information were placed in a conspicuous place on page 1 in brief outline form itemizing the procedure for such action, I am confident that you will secure far better response. Many in your "audience" do not know to whom to write; how to address their letter; what Bill to refer to; what to ask for; and other directive and helpful information that will aid in accomplishing our overall goal.

Furthermore, additional instructions inciting your readers to canvass organized groups who would be directly affected through a curtailment of refrigeration service to likewise write Congressmen, Senators, and others who may help to enlighten the uninformed. Such groups include local restaurant owners associations, grocers associations, meat dealers associations, wholesale grocers groups, meat packers associations, civic groups, in fact, all similar bodies and organizations that depend to any degree upon refrigeration for their business or for the health of their constituents.

In other words, inject some "how" information into your excellent informative articles. Only by enlisting the aid of everyone concerned can we ever hope to present sufficient strength of evidence in order to gain adequate recognition.

Certainly our cause is a just one. Our entire economic structure as it relates to food and the nation's health is absolutely dependent upon adequate refrigeration. Those who are so shortsighted as to believe that ice can supplant mechanical refrigeration must be made to realize the impossibility of such change. Many fail to realize that adequate ice manufacturing facilities do not today exist; that machinery is not available with which to build new ice plants; that manpower is not available with which to build the machinery or the ice plants much less to actually man them; that adequate trucking facilities are not available nor can they be procured; that likewise delivery men cannot be obtained and women cannot certainly handle the job; and, last but not least, where are the users of refrigeration to put the ice even though facilities were provided through which it could be obtained.

Likewise, many of the uninformed consider mechanical refrigeration in the same vein with washing machines, radios, vacuum sweepers, ironers, etc. True, we all want to retain all of these comfort-giving appliances which have helped to make the American home what it is today. But in times like these, our comforts are secondary.

However, no person of normal intelligence can consider modern refrigeration, even the attractive refrigerator in the home, as a luxury. The household refrigerator is today absolutely imperative in safeguarding health. With milk deliveries every other day, with food rationing and food conservation, and kitchen grease saving uppermost in the minds of most housewives, you cannot classify this refrigerator as a luxury. If need be, we can and we will get along without our washers and our vacuum sweepers and our mixers, etc., but certainly we cannot dispense with refrigeration.

Another important point that is generally overlooked is the fact that the proper maintenance of refrigeration throughout the entire country will definitely require a relatively small number of men. If one were to draw a comparison between the manpower required for refrigeration maintenance and the manpower for a conversion to ice, the contrast could be readily appreciated.

If we have to have refrigeration, and certainly no one can deny this fact, and since everyone realizes that a serious manpower shortage exists, it is only logical and plain common sense (if very much of that is still left) to adopt the plan which requires the minimum amount of disruption of economics and a minimum amount of people.

The biggest job of all lies ahead—the retention of capable manpower—so let us endeavor to enlist the aid of everyone possible in order to place these all-important facts before the government and the public and thus, retain trained refrigeration manpower in a position where it will provide maximum benefits in our overall war effort.

Norbert E. Rau

What's Doing in Service

'Wrestling' With Cases and Big Units Eliminated By Use of Grease Rack Lift

MONTGOMERY, Ala.—High speed handling of heavy refrigerator meat display cases, commercial refrigeration compressors, and the like is made possible at Nolin Brothers Refrigeration Co. here by the installation of an ordinary filling station grease rack.

A. C. Nolin, head of the shop, uses the heavy rack primarily as a "lift" cooperating with truck and repair shop in which the cases are rebuilt, transformed to cold-storage units, etc. Formerly, the truck backed up to a low loading dock on the left side of the building, and it took several men to wrestle it off and get it pushed inside the shop.

When service stations around Montgomery began closing up, Nolin saw the opportunity to eliminate this slow, strenuous work—and purchased a grease rack lift capable of handling 10 tons. This is installed in the ground directly in front of a concrete apron leading into the main shop door, and arranged so that it can be swung in a complete circle if necessary.

The two steel strips formerly supporting car wheels have been covered over with heavy 2 x 6 timbers, to form a solid platform. Now, when a truck comes in with a display case which must be repaired quickly, it is a simple matter to place a carrying dolly on the lift rack, raise it to the level of the truck bed, push the case on to the dolly, and reverse the process, lowering it to the concrete apron to be rolled immediately into the shop.

Nolin paid $75 for the grease rack lift, complete with motor and controls, and believes it paid for itself in two months. Literally hours are cut off the time between picking up a heavy case and delivering it.

Radio Test Equipment To Be Distributed On New Basis Without Preference Rating

WASHINGTON, D. C.—After May 1, deliveries of radio and radar test equipment will be made in accordance with schedules determined under M-293 instead of preference ratings, it was stated at a recent meeting of the Test Equipment Industry Advisory Committee with the Radio and Radar Division of the War Production Board.

Buyers of test equipment will fill in Form 556, on the basis of which the placement and delivery of new orders will be determined. These forms, available at WPB regional offices, will be submitted to the WPB Radio and Radar Division for approval, and the approved forms will be attached to purchase orders.

While it is expected that buyers no longer will be able to trump each others bids for equipment with triple A ratings, they will be able, under restrictions, to obtain directives for prompt delivery. However, requests for such directives will be scrutinized more closely, leading to a swift reduction in the number of them in force, it was said.

Elmer Crane, Chief of the Components Section, said that while deliveries of test equipment no longer would be subject to the competition of priority ratings, production would continue to be expedited by the use of ratings to purchase components and materials.

Since test equipment purchase orders hereafter are to carry WPB approval on Form 556, manufacturers receiving purchase orders without such approval should return them to their customers, it was stated. Jobbers, like manufacturers, are to see to it that their customers receive approval on Form 556, and that the approved form is sent with the purchase order to the producer.

Southern Distributors 'Pool' Efforts To Permit All-Makes Servicing

BIRMINGHAM, Ala.—A successful school for servicemen has just been held in six Alabama cities, sponsored by a half dozen electrical appliance distributors with the cooperation of the Alabama Power Co. The object was to train the new men and women in the business and to induce existing dealers and shops to broaden out their service, do more work and include more makes of appliances.

The old system of each distributors having his own dealer and service organization has more or less broken down on account of wartime conditions. Therefore, distributors are in a measure pooling their dealer setups with the objective of seeing that appliances now in use are serviced regardless of make or location. Thus a shop which has been specializing on only one or two makes of refrigerators for example will be urged to service others and will be given the necessary help to that end by the distributors.

The schools lasted for two days in each town with each of the six distributors having a part on the program. The instruction had to do with the more elemental phases of service, how to order parts, how to diagnose troubles, etc. Since there are so many new persons in the service field, the instruction was kept on general terms and of a nature that applied to all the better known makes of appliances.

This was the first time that distributors in this territory have thus gotten together and tackled the service problem. Those cooperating were Moore-Handley Hardware Co. (Westinghouse); Matthews Electric Co. (General Electric); Nash-Kelvinator Co. (Kelvinator); Steel City Supply Co. (Crosley); Birmingham Electric Battery Co. (Norge), and Graybar Electric Co. (Hot Point).

'Old Timers' Best Bet Now, Says Pittburgh Contractor

PITTSBURGH—That refrigeration service handled by old-timers in the field is the key to successful wartime service operation, is affirmed by C. A. Nees, manager, Pittsburgh Refrigeration Co., specialists in food refrigeration installations.

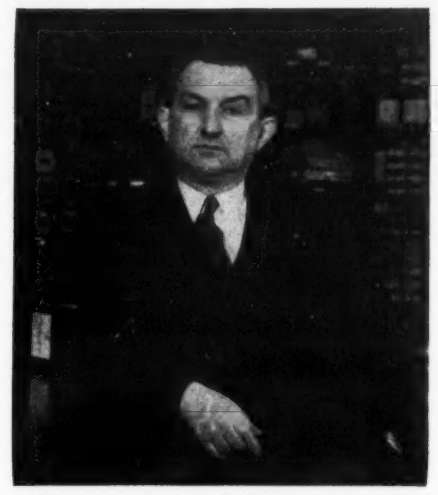
Elimination of call-backs in his business, Nees attributes to his four service men all over 38 who, he says, are reliable and experienced in doing jobs thoroughly.

Very little work is done at the shop. The service men carry with them more testing equipment and tools than are ordinarily necessary. However, the men are instructed to "stay on the job" and can be relied upon not to leave until the disorder is definitely remedied.

While Nees' men do spend more time per job than is usual, the time has been proven worthwhile by the drop in the number of call-backs.

Nees also instituted charging customers time and a half for over-time work. This charge, he claims, has done away with many night calls.

Keely Is Manager of Airo Supply Co.

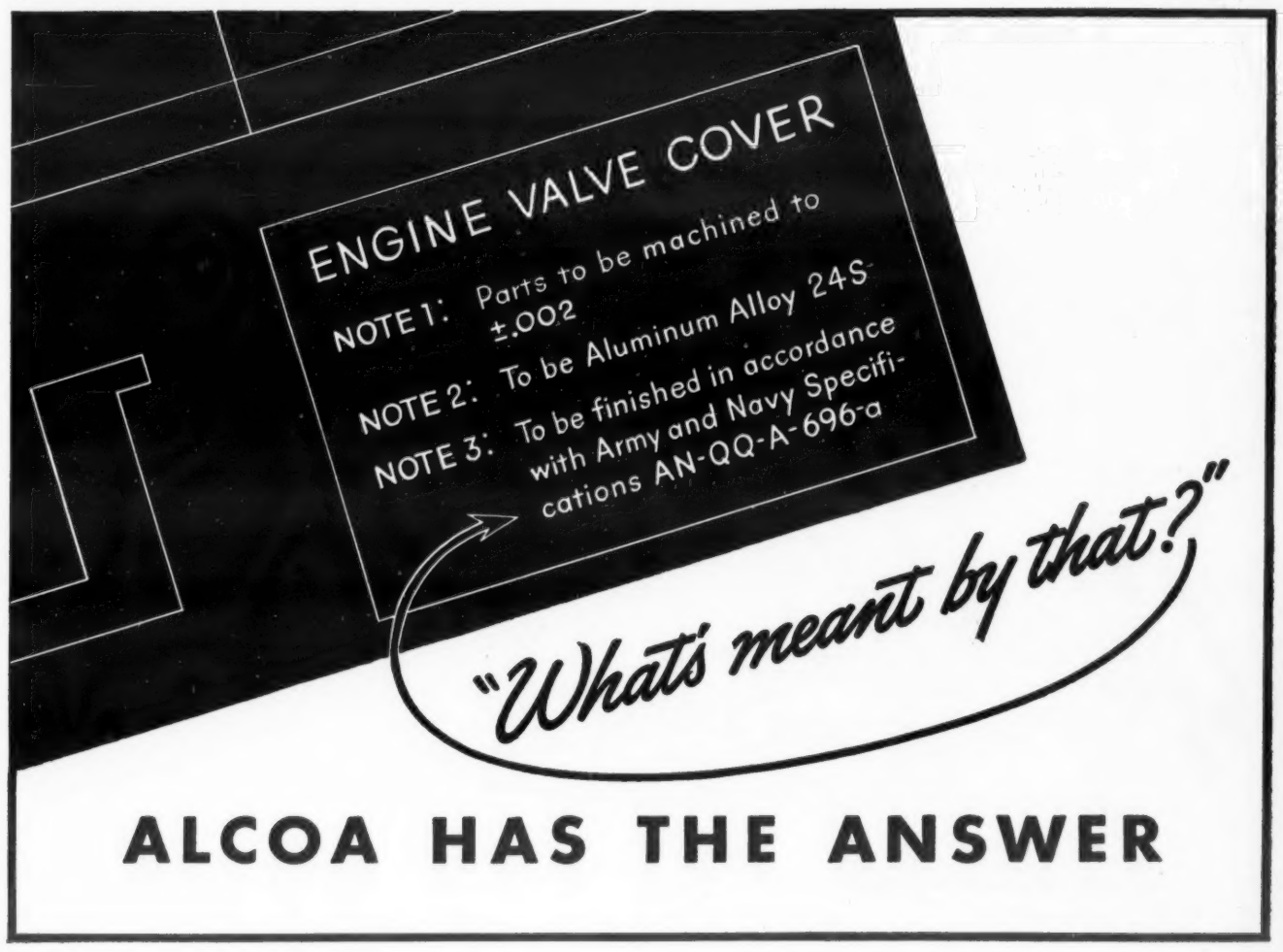


L. C. KEELY
Veteran in Chicago refrigeration circles takes new post.

* * *

CHICAGO—L. C. Keely has been appointed manager of the Airo Supply Co., E. P. Sorensen, president of the firm, announces.

Keely joins Airo after 12 years with the Seeger Refrigeration Co., commercial refrigerator manufacturer, as manager of the company's Chicago branch. Prior to his connection with Seeger he was, for a number of years, vice president in charge of sales and advertising for the Zerozone Corp. Before entering the refrigeration field Keely managed one of Chicago's largest automobile dealerships. He is a veteran of the first World War.


ENGINE VALVE COVER
NOTE 1: Parts to be machined to ±.002
NOTE 2: To be Aluminum Alloy 24S
NOTE 3: To be finished in accordance with Army and Navy Specifications AN-QQ-A-696-a
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Some of these finishes serve as base coatings for paint, providing surfaces to which the paint is highly adherent. All offer increased resistance to corrosion. Some look like uncoated aluminum. Some are colored or black.

If you are stymied by lack of information on Alumilite finishes—what their symbols and names mean, where the finishes should be used, how they are applied—get in touch with us.

Or, if you're puzzled with some question about aluminum alloys and their fabrication, come direct to us, too. Alcoa engineers have spent a lifetime finding the answers to just such questions. ALUMINUM COMPANY OF AMERICA, 1975 Gulf Building, Pittsburgh, Penna.

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WROT FITTINGS
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ACCURATELY made fittings or parts by NIBCO save substantial sums in assembly costs. Accuracy is truly a religion here. Specially designed equipment operated by men who are instinctively fine craftsmen make precision manufacture almost automatic. Constant inspection with individual gauge testing of every item makes it positive. Get our Catalog No. 613. Some of the 7000 items and sizes of our standard fittings shown there may be just what you need. Whenever you require special tubular or cast parts, you can be sure of absolute uniformity and highest quality when they're made by NIBCO.
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VALVES AND FITTINGS SINCE 1904

How Air Conditioning Helps Train U.S. Armored Force Personnel

By Captain Robert M. Pollock, Headquarters Armored Force, Ft. Knox, Ky.

Air conditioning and refrigeration have gone to war, and no better proof of this fact can be found than in the Armored Force Medical Research Laboratory at Fort Knox, Ky., headquarters of America's two-fisted, hard-striking Armored Force.

In a $300,000 reinforced concrete building, three separate systems for the mechanical control of air, its heating and cooling, are in constant use. These systems are operated to supply conditioned air for the building as a whole, which has glass-brick windows except for two fire escape exits on its upper story, to heat a hot-room, and to cool a cold-room.

The latter two rooms are in addition to splendidly equipped chemical, physiological, physics, and optic laboratories, and they are used for work in extremely high and low temperatures. They are a part of the medical laboratory's complete equipment used in scientifically determining reactions of Armored Force personnel to certain climatic and work conditions and ways and means of improving the effectiveness of these men.

Unusual features of these rooms are their abilities to simulate the extreme climatic conditions under which Armoraiders may be called upon to fight. Most intensive experiment has been in the hot-room under desert conditions, (120-degree day-time heat, low humidity), where 17 men lived in the room for 26 days. They ate, slept and worked inside these four walls, while just outside, far different from the desert climate within, lay the familiar climate of Kentucky!

How Test Room Is Used

The experiments operated in this manner: For several days these 17 men performed a set exercise routine, rested, ate and slept under normal temperature conditions. Their reactions to the work routine were carefully noted. Then came the extreme temperatures. Again their reactions were tabulated. When the temperature first rose, the ability of all the men to perform work slumped below their ability at normal temperatures, but when these volunteers became acclimated to the extreme heat, they were able once more to do their duties with a minimum of bodily reaction.

A comparison for their working abilities before and after high temperatures began in the hot-room gave these laboratory technicians definite information as to the human reaction to desert conditions and the length of time necessary to become acclimatized to them.

With the desert playing its present important role in armored warfare, the results of these Armored Force Medical Research Laboratory experiments have already been put to use and may prove an important margin of victory.

Cold-room experiments of similar nature are run under simulated Arctic conditions. Up to the present time, cold-room facilities have been chiefly used for a study of clothing best designed to protect our soldiers from sub-zero conditions they may encounter in combat. The experiments also include work with various types of food and food containers suitable for Arctic temperatures.

Air Conditioning System

Air conditioning has accounted for the singular success of this laboratory. Let us examine each of the units separately. Conditioning of the hot-room is obtained by means of an independent heating and humidifying unit securing its energy from the main boiler used in heating the building itself. The unit is of the forced-air type using two coils, a pre-heat coil of 500 e.d.r. and a re-heat coil of 800 e.d.r. An injector-type humidifier in located in front of the re-heat coil and directly in the intake of a squirrel-cage blower.

The pre-heat coil is used for heating the fresh-air intake. This intake may be regulated from 500 to 1,000 cu. ft. per minute. Re-circulated air

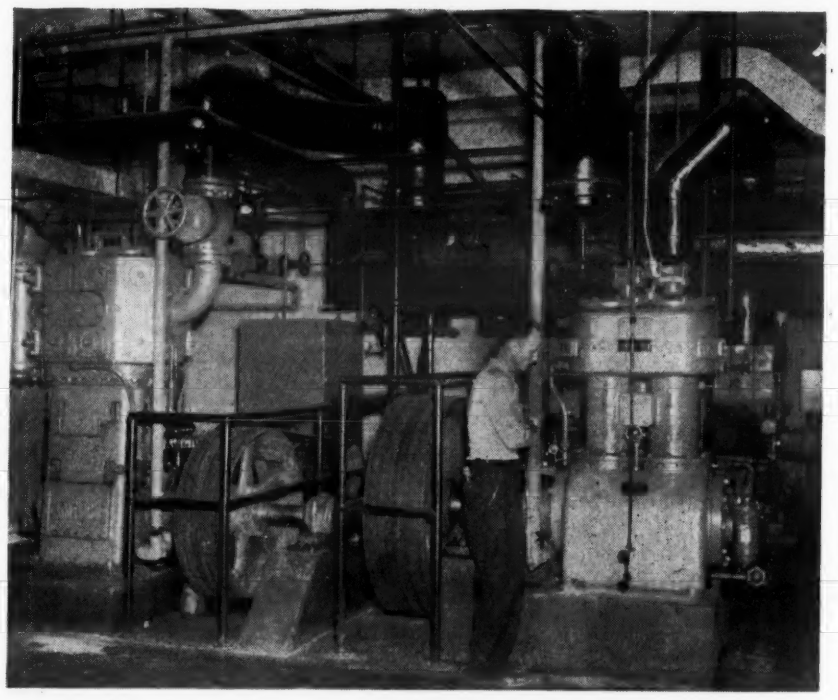
(Concluded on Page 15, Column 1)

Testing an 'Armoraider's' Equipment For the Arctic

—Photograph by Signal Section, Hq. Armored Force

Three Armoraiders, clad in their experimental clothing, climb out of an M-4 tank in the cold-room of the Armored Force Medical Research Laboratory at Ft. Knox, Ky. Cold room facilities have been used chiefly to check clothing and foods suitable for arctic temperatures.

Machines To Bring Polar Regions To Fort Knox



—Photograph by Signal Section, Hq. Armored Force

These two Worthing compressors, 10½ x 8 and 9 x 9, do yeoman service in getting temperatures down to the desired sub-zero levels in the Armored Force Laboratory's cold room. In this picture James W. Gree, engineer in charge of air conditioning operations for the building, checks his machinery gauges. Intercooler is suspended between the two compressors in the background.

Guarding the Health
OF OUR ARMED FORCES
ON LAND AND SEA!
Mueller Brass Co. packless line valves and tripl-seal diaphragm line valves are in use with our armed forces on practically every front. Just as refrigeration is vital to our men in service in the preservation of food and serums, so too these valves are essential to insure uninterrupted service of the refrigerating unit should it become necessary to make repairs or alterations.
Mueller Brass Co. PACKLESS LINE VALVES are of exceptionally sturdy construction and will successfully withstand severe usage in service. The valve body and integral mounting plate are forged brass. The bellows has a safety factor much in excess of anything required of it in service. The cap is reinforced to compensate for the continual upward thrust of stem and spring. A rubber cap covering the bellows affords positive protection against moisture.
The openings of these valves are full flow, having less restriction than two elbows of a corresponding size. These valves are packed in heavy, individual cartons to assure protection in shipping and stocking.
Furnished in all types and sizes from ¼" to 1½" inclusive.
Our TRIPL-SEAL DIAPHRAGM VALVES are constructed upon a new and revolutionary principle involving a minimum of movement. The greatly increased multiple diaphragm is never deflected past its normal center; thus giving it much greater service life. It provides positive sealing at three essential points. The valve has positive and easy closing provided by a single turn of the hand wheel.
Body and cap are of seepless forged brass; maximum mounting strength is provided.
Valves are furnished in two way and angle type —flared or solder type ends, and a complete range of all necessary sizes.
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gives immediate relief to frozen units. Dissolves formed ice—prevents new ice in expansion valves and capillary tubes. ANSUL ICE-X is equally effective with methyl chloride, acrolein methyl chloride, methylene chloride and all "Freon" refrigerants. Will not react with refrigerants or oil. Leaves no residue. Will not corrode.

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Safe, easy to use and fully machine tested. Prompt efficient service through an Ansul Jobber near you.

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INVEST AT LEAST 10% OF YOUR EARNINGS IN WAR BONDS

Apparatus For Test Room Designed To Provide Any 'Possible' Condition

(Concluded from Page 14, Column 5)

is mixed between the pre-heat and re-heat coils and then humidified according to setting. For desert training, where air is hot and dry, the re-circulated air is drawn through a calcium-chloride-filled cabinet for dehumidifying.

With 12 to 15 men working in the hot room, it is possible by this means to obtain and hold a relative humidity of 12% when the room dry-bulb temperature is about 130 degrees. The hot-room is also provided with infra-red lights to simulate desert or tropical sun load. These are 150 lamps of 250 watts each, suspended on brackets of 10. They may be evenly distributed over the room or concentrated over any specific subjects desired.

Maximum dry-bulb temperature of 160° F. may be secured. This involves top operation of the heating unit, whose capacity is estimated at 785,000 B.t.u. per hour, with a steam pressure at the coil of six pounds. Ninety-five per cent relative humidity is possible, if condensation does not occur too rapidly on the walls which may not be at the same temperature as the room.

Control Apparatus

Control of the hot-room is by a pneumatic thermostat, operating two automatic valves to the coils of the heating unit and by a humidistat, operating an automatic valve to the humidifier. Air change is performed by an exhaust fan. Hot-room wall interiors are covered with 3/16-inch asbestos board to withstand the terrific heat. Walls are vapor-sealed and insulated with four inches of rock wool. The floor is a 12-inch reinforced concrete slab to withstand the strain of 60-ton tanks. (Tanks are frequently placed inside this room for experimental purposes). The hot-room equipment was built by the National Korectaire Co. of Chicago, who installed the cold-room equipment also.

The air conditioning unit for the laboratory building and the refrigerating units for the cold-room were built by the Carbondale division, Worthington Pump and Machinery Corp. The cold-room equipment is a two-stage ammonia system with a forced-air coil inside the room, cooling by direct expansion. The second stage 9 x 9 single-action compressor is powered by a 100-hp. Allis-Chalmers motor with a compensator starter. The first-stage double-acting 10½ x 8 compressor discharges into an intercooler, to which the suction line of the 9 x 9 is attached. The hot gas is condensed in an Acme Products Co. evaporative condenser.

Coils and Blowers

The cooling unit is composed of six 12-row coils connected by a common header and surge and heat exchanger. Air is handled by six squirrel-cage fans, three on each shaft, each powered by a 7½-hp. motor. Temperature can be lowered at a rate of one degree per minute with a —40 degree refrigerant. The room can be lowered to —65° F.

Air is admitted to the room at a rate of 1,000 cu. ft. per minute and is exhausted at the same rate. Air to be admitted is first taken through a forced-air second-stage coil, cooled to 40° F. by the liquid line from the evaporative condenser. This air is then drawn through a Bryant Heater Co. dehumidifier, in which the cooled air is further dried by passing through a silica gel drum. It is then forced into the cold-room. Here, still another small coil chills it before it actually is mixed with the air of the room. At this point the air being admitted is approaching zero humidity at 40 degrees. The silica gel drum rotates with the operation of the unit, and it is activated by means of a gas burner. The moisture is exhausted into the open air outside.

Men breathing and equipment operating within the cold-room cause considerable deposit of frost and ice on the coils. This is removed by means of calcium chloride solution sprayed on the fans at intervals as needed. The calcium chloride solution pit and pump are located immediately outside the wall of the cold-room.

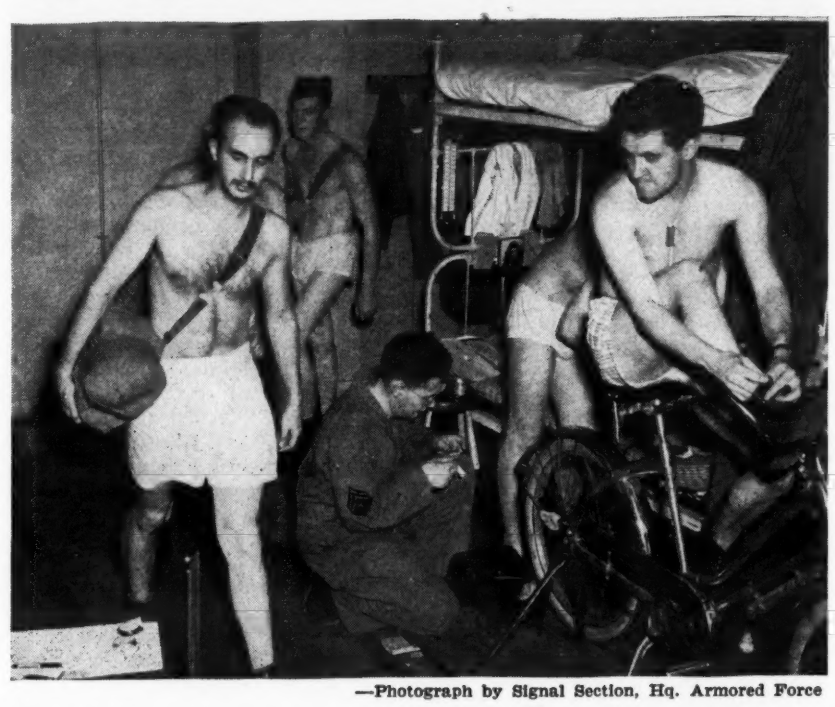
Insulation of the cold-room is effectively secured with three 4-inch layers of cork on floor, ceiling and walls. Both the hot-rooms and the cold-room have insulated overhead doors large enough to admit tanks from the outside.

Air conditioning plays an important role in all other parts of this modern building, for the entire structure is heated and cooled by a split air conditioning and heating system. Thus, a large staff of technicians, headed by Lt. Col. Willard Machle, commanding officer of the Armored Force Medical Research Laboratory, works under healthful conditions in their exhaustive experiments to improve the health and fighting trim of Armored Force soldiers.

Engineering expert James W. Gregg, former contractor and distributor for Frigidaire, supervises the operations of the laboratory's complex heating and cooling systems.

Meanwhile, the Armored Force Medical Research Laboratory, utilizing advancements in the field of air conditioning, brings the desert, the jungle and the Arctic to Fort Knox, Ky., and works to save the lives of American soldiers throughout the world.

The 'Hot Room' Tests Men For the Desert



—Photograph by Signal Section, Hq. Armored Force

Many different kinds of work routines are performed simultaneously in the hot room of the Ft. Knox Medical Research Laboratory. In this picture, an Armoraider, just prior to pedaling a set number of miles on his stationary bicycle, watches three of his fellow-workers trudge off their marching duties, loaded with full field pack. Air conditioning has made possible the simulation in this laboratory of almost any kind of condition the Armored Force might meet in doing battle in any part of the world.

'Boundary Limits' Set On Motor Order L-221

WASHINGTON, D. C.—The term "continental United States and Canada" means the 48 states, the District of Columbia, and Canada for the purposes of General Conservation Order L-221, according to an interpretation issued by WPB.

Under this interpretation, deliveries of electric motors and generators for use in Alaska, the Panama Canal Zone, Puerto Rico and other possessions and territories of the United States are exempt from L-221.

New Book on Electricity

PITTSBURGH—"Fundamentals of Electricity," a recently published textbook for pre-induction and public school study, is the contribution of Carnegie-Illinois Steel Corp. to the War Department in answer to its demand for a training manual on electricity.

Information in the book is based on the same practical plan of instruction given to apprentices in the Illinois-Steel Corp.

New Form Expedites Plumbing Priorities

WASHINGTON, D. C.—To expedite priority applications for new plumbing and heating equipment for civilian residential use, Form PD-851 has been issued by the Plumbing and Heating Division of the WPB.

It can be obtained at WPB Field Offices and is to be filed by the occupant or owner of a private dwelling who desires priority assistance for the purchase of new plumbing, heating, domestic cooking equipment (except electrical), or material, the sale of which is restricted by Limitation Order L-79.

This new form, which will be of mutual assistance to the purchaser, plumber and dealer, further simplifies the procedure so that applications will be handled in the Field Offices, familiar with local conditions.

The instructions indicate when the form should or should not be used. Form PD-851 should not be used to obtain plumbing and heating equipment for repair or replacement of existing equipment which is worn out, damaged or destroyed. Repair or replacement procedure should be handled by the material suppliers, who are assisted by Order P-84.

Form PD-851 should not be used to acquire any item which is rationed by OPA. The local rationing board should be consulted concerning rationed items.

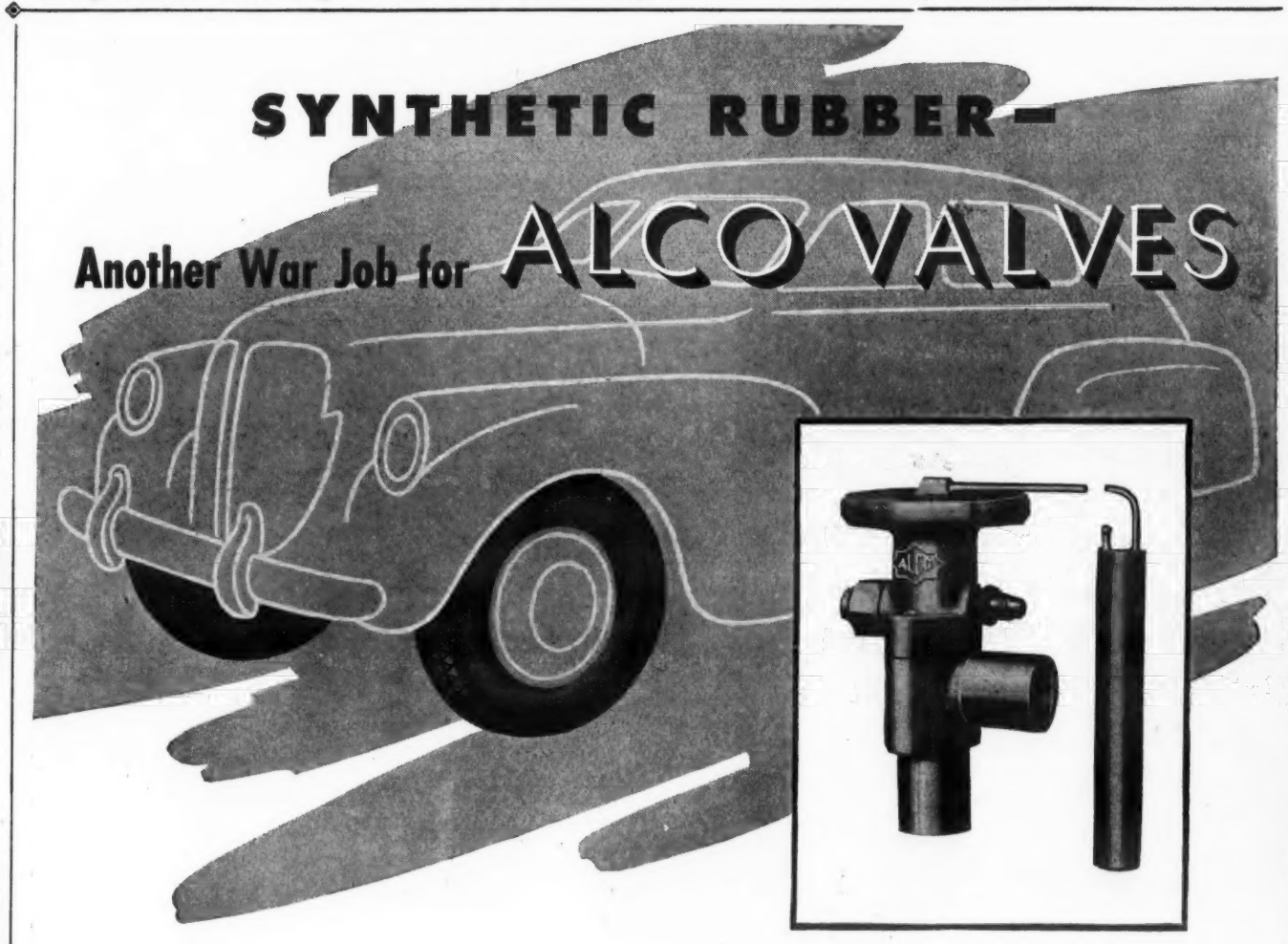
When applying on Form PD-851, the ultimate consumer (occupant or owner) should file two copies with his nearest WPB Field Office and keep one copy for his own records.

"DAY & NIGHT"
A Complete line of Storage Type Water Coolers in accordance with Latest W. P. B. Regulations
DRINKING FOUNTAINS
NAVY-2 Models for Shipboard use
ARMY-NAVY-2 Models for land use
CAFETERIA TYPE COOLERS
ARMY-NAVY 2 Models for Mess Halls
INSULATED STORAGE TANK TYPES
6 Models for Bakery Service • 3 Models for Film Processing •
DAY NIGHT WRITE FOR LATEST DATA
COOLER DIVISION
DAY & NIGHT MFG. CO.
MONROVIA • CALIFORNIA
FACTORY REPRESENTATIVES
NEW YORK A. C. Homeyer, 682 Bdwy. • CHICAGO Marc Shantz, 565 Wash. Blvd.
ST. LOUIS R. H. Spangler, 3331 Market St. • DECATUR, GA. I. E. Parker, 228 2nd St.

REFRIGERATION PARTS NEEDED
● Idle and surplus inventories of refrigeration parts can now be put to essential use in helping to maintain the nation's huge investment in refrigeration.
We buy outright for cash, usable parts for distribution to over 20,000 refrigeration service-men customers. Let us put your idle inventories to good use — you will then be helping conserve scarce and precious materials.
The Harry Alter Co.
1728 So. Michigan Ave.
Chicago, Illinois

PURO ELECTRIC WATER COOLERS
Different models available for the various requirements of government agencies and war production plants.
PURO FILTER CORP.
440 Lafayette St., New York
DRINKING WATER SPECIALISTS FOR 40 YEARS.

SYNTHETIC RUBBER—
Another War Job for ALCO VALVES



Certain processes in the manufacture of synthetic rubber require large amounts of refrigeration—extremely low temperatures are necessary. To speed the production of this vital commodity, essential to our war and civilian economy alike, Alco is working closely with synthetic rubber makers in the development of special, low-temperature controls.

This is only one among many special war jobs for Alco Valves—others include valves designed and engineered to meet the requirements of the U. S. Navy for surface ships and submarines, for merchant vessels, for low-temperature testing rooms in aviation plants, and other important industrial applications.

Again and again, Alco engineering experience and ability have been called upon to serve the War effort of our nation. When Victory is finally won, the result will be better and finer Alco Valves for all civilian uses.

ALCO VALVE COMPANY, 853 Kingsland Avenue, St. Louis, Missouri

ALCO Engineered Refrigerant Controls
THE STANDARD OF THE INDUSTRY

Plans Sprouting on Marketing Home Dehydrator Lines

NEW YORK CITY—A domestic food dehydrator will be introduced into this market for the first time within a few weeks by the Metropolitan Device Co. of Brooklyn, it is reported here.

Although the Metropolitan model will be the first to appear here, at least a dozen other manufacturers will offer similar lines within the coming months. It is understood that Stewart-Warner Co., Inc. is one of these.

Because of critical material shortages, the home dehydrators will not be manufactured in large numbers until next year when WPB will give its official okay to large-scale production according to some reports that have come out of Washington. At that time, it is reported, needed materials will be pulled from stock now earmarked by WPB for the manufacture of commercial dehydrators.

Stewart-Warner's dehydrator specifications, it is said, are perfected to sell the device in a higher price bracket, estimated at between $50 and $60. Sears, Roebuck & Co.; the Georgia Power Co.; and a number of West Coast companies are also reported planning dehydrators.

One company said to have home dehydrators on the market now is Lansdowne & Moody of Houston, Tex. Their unit is built of hardwood and fibre and sells for $5.95.

According to the Metropolitan Device Co., they are still experimenting with plywood, solid wood, and composition board but expect to decide on the most desirable construction in a short time. They report some difficulty in getting the necessary small motors.

10-Day Furniture Mart In Chicago June 21-30

CHICAGO — A 10-day furniture market will be held here June 21-30 according to the sponsors as a result of a poll which revealed that "96% of America's merchants and 80% of its manufacturers believe it necessary."

In compliance with the wishes of the Office of Defense Transportation the marts eliminated their spring and fall shows last year but went through with the regular winter exposition in spite of censure from Joseph B. Eastman, chief of ODT.

Furniture mart governors, who are manufacturers, came to the decision on their 1943 summer show plans after sounding out the needs of merchants and producers. The concensus was that millions of miles of travel by salesmen to stores and buyers to factories will be saved by the summer market event.

Lawrence H. Whiting, president of the American Furniture Mart, and John C. Goodall, general manager of the Merchandise Mart, both say that buyers will not be encouraged to attend the market centers during the buying period and that stores are being asked to send fewer buyers than they have in the past in order to cooperate fully with the ODT.

Bronold Promoted By Westinghouse

PITTSBURGH—A. J. Bronold's appointment as assistant to vice president of the Westinghouse Electric & Mfg. Co. has been announced by B. W. Clark, vice president.

For the past two years Bronold has been manager of the company's Los Angeles office. His future headquarters will be in the Pittsburgh office where he will work on the general marketing policies of the company.

Walter G. Willson, who for 18 years has been Westinghouse manager at Phoenix, Arizona, will succeed Bronold as Los Angeles manager.

Bronold is a graduate of the Bliss Electrical School. He has been with Westinghouse since 1926, serving first in the central station sales department, and successively as branch manager for the lamp division at Columbus and Grand Rapids.

Robert J. Wilkie Dead; Operated Batavia Firm

BATAVIA, N. Y.—Robert J. Wilkie, 44, an electrical refrigeration serviceman and a former wrestler, died after a heart attack at his home here recently.

In recent years Wilkie operated his own commercial refrigeration business in Batavia.

He was at one time a professional heavyweight wrestler and was well-known in wrestling circles.

The ABC's of Better Health Through Proper Diet

Edwina H. Nolan, manager of General Electric's Home Service Station, explains the use of the G-E Consumers Institute's new Master Nutrition Guide to three Red Cross nutrition workers. Single copies of the Nutrition Guide are free to home economists and teachers.

G-E 'Master Nutrition Guide' Provides Short Course to Health - Giving Diet

NEW YORK CITY—General Electric Consumers Institute at Bridgeport, Conn., with a view to the basic importance of proper food, has come forward with its "Master Nutrition Guide" as a medium in meeting an increasing demand for a simple group-method to teach expanding numbers of war workers the ABCs of a health-giving diet.

"Master Nutrition Guide," a product of G-E scientific research plus the work of Edwina H. Nolan and her staff of expert home economists, is published to be used by industrial dietitians, home economists, school teachers, home demonstration agents, department merchandisers or a leader of any group interested in teaching a nutrition course.

The course, having been subjected to trial in factories, department stores, community centers, and an army ordnance plant and having met with distinct success in each place, gives proven information on (1) how to present nutrition instruction which will get the story across in the factory and in the home; (2) how to build advance interest in nutrition schools; and (3) how to maintain audience interest for the length of the course (three or four weeks).

Samples of materials effectively used in conducting the course are contained in the master guide and include the following items: Certificate to be given upon completion of the course; an 18-page summary of the course for distribution; two Consumers' Institute booklets entitled "Pack a Lunch That Packs a Punch" and "How to Get the Host Out of the Food You Buy;" copy of the Consumer's Pledge; sample of the nutrition game "Vita-min-go;" a booklet "A Captain In the Kitchen;" blackout suggestions, and home laundry suggestions.

Copies of the Master Nutrition Guide are offered free in single copies to instructors who plan to use the course. Extra copies may be obtained at cost.

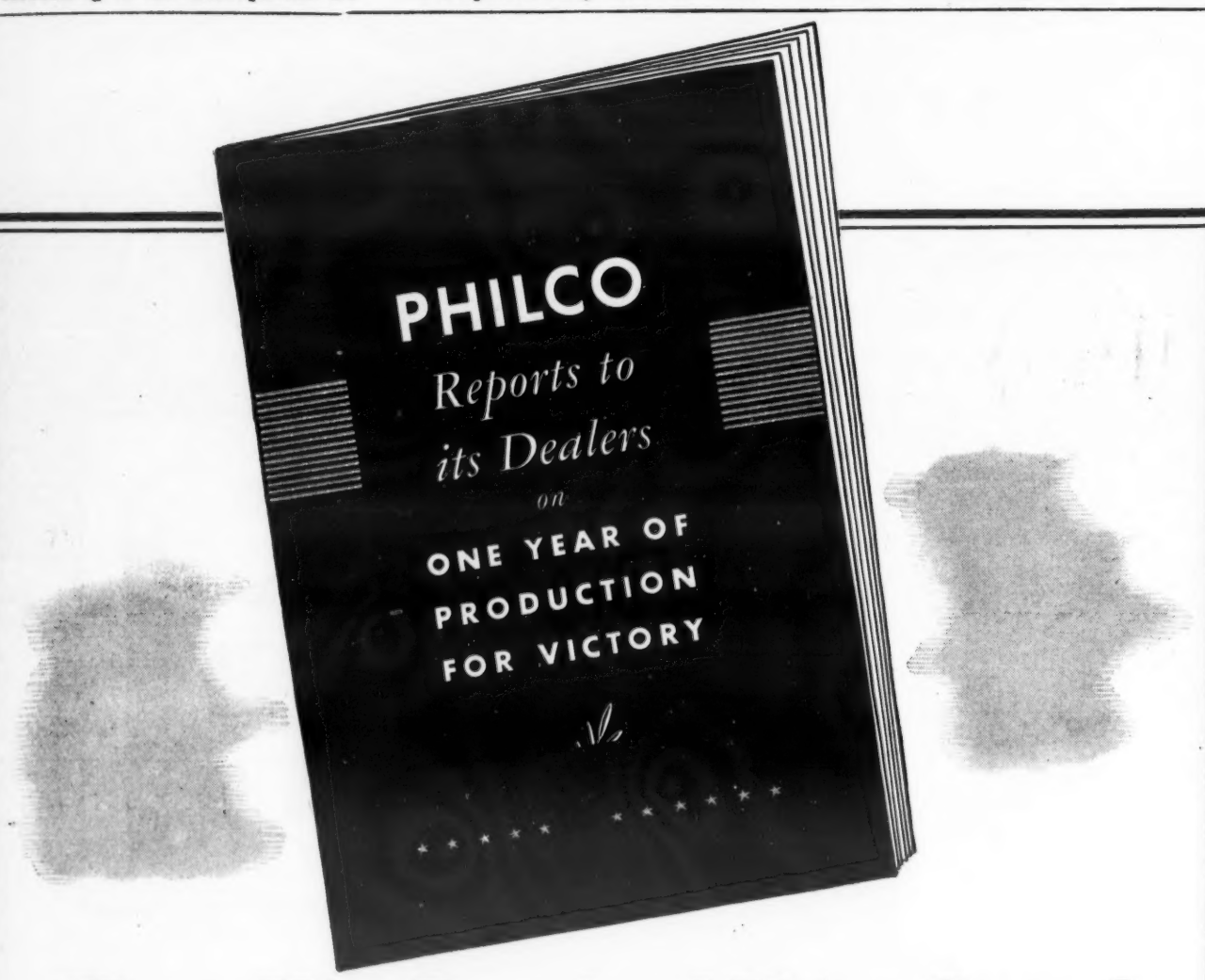
Chain Furniture Stores Put In Position Of 'Selling Themselves Out of Business'

NEW YORK CITY—Operation of furniture chain stores under inventory control order L-219 is becoming so difficult that retailers believe they will be forced to close one-third of their branches by the end of the year.

Limitations hamper chain stores to a greater degree than independent stores, it is said, because a chain must rely upon its one central warehouse which, in normal times, is no hardship but the present shipping restrictions are bringing about the peculiar situation of furniture chains "selling themselves out of business."

The WPB, aware of the predicament, promises to give serious consideration to individual appeals for relief although an appeal for blanket relief on floor samples, filed by the National Retail Furniture Assn., was denied. In the meantime, a number of chains await WPB's decision before making definite plans to close some of their branches.

By closing branches, the open-to-buy is increased for the remaining stores and the closed-out floor samples used to build up sample stocks throughout the chain.



Have You Received Your Copy?

This memorable book, "Philco Reports to its Dealers on One Year of Production for Victory," was recently mailed to all Philco dealers of America. If you haven't received your copy, get in touch with your Philco Distributor today and ask for it. Or write to Philco Corporation, Philadelphia, Pa. It's a book you will not want to miss!

★ ★ ★

It is just about one year ago that Philco converted its complete research, manufacturing and promotional facilities 100% to the service of our fighting forces. During that year, the war achievements of the Philco laboratories and production lines form the brightest chapter in the long history of Philco industrial accomplishment. Its advertising activities have received nationwide recognition for their service in the interest of public war morale.

The story of this year of intense activity and achievement has real significance for every member of the Philco family. This report was written so that you and every other Philco dealer may know how the inventive research and manufacturing skill that gave you the most valuable franchise in the appliance field is now doing its part for Victory.

Be sure to read this fascinating review of Philco's war activities. For every Philco dealer, it's an annual report . . . *and a promise for the future!*

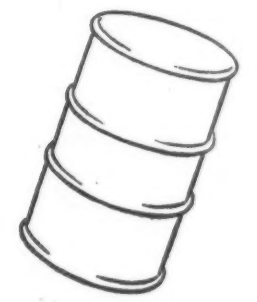
PHILCO CORPORATION

ARMY E NAVY

OUR WAR PRODUCTION PLEDGE:

MORE • BETTER • SOONER

METHYLENE CHLORIDE



Refrigeration Grade

Highest Purity

Important Don't let idle cylinders or drums hold up supplies now available. Empty all containers promptly. Look through your stocks and warehouses for any empty containers . . . *and return them promptly*

Pure . . . dry . . . uniform . . . manufactured to meet the rigid requirements of the refrigeration industry by du Pont, pioneer producer of Methylene Chloride and other popular refrigerants. Conditions permitting, current requirements for refrigeration purposes can be supplied, subject of course to the regulations of the War Production Board. Order what you need but please do not stock up unnecessarily. Electrochemicals Department, E. I. du Pont de Nemours & Co. (Inc.) Wilmington, Delaware.

DU PONT

METHYLENE CHLORIDE

BETTER THINGS for BETTER LIVING . . . . THROUGH CHEMISTRY

Philadelphia's 'Fix 'Em Up' Drive on Again Jumped Weekly Total of Repairs 88% in '42

Newspapers, Displays, Stickers To Smash Home Fact That Facilities Are on Hand To 'Make 'Em Do'

PHILADELPHIA — Philadelphia's Electric Appliance Service Plan, the original "Fix 'Em Up—Make 'Em Do" activity, proved so signally effective in 1942, that the Electrical Association of Philadelphia has been prompt in extending the activity into the current year.

In outlining the success achieved by the activity last year, John A. Morrison, managing director of the association, brought out that the repairs per dealer per week in March, 1942, averaged 26, while in December, 1942, the number of repairs per dealer per week averaged 49, an increase of 88%. The total number of dealers participating was 175.

MILLION DOLLAR BUSINESS

Following a study of surveys made during 1942, it is estimated that the number of repairs made by all dealers participating totaled 260,000, and that the dollar volume of this business was in the excess of one million dollars.

In connection with the 1943 activity, it was announced that there would be consistent advertising during the entire period in Philadelphia's four metropolitan newspapers; that regular advertising throughout the period would also be carried in 40 Philadelphia neighborhood and suburban newspapers; and that the names of the participating dealers would be listed in these advertisements.

In support of the newspaper advertising, the Philadelphia Electric Co. devoted one-half of the March bill enclosure to the electric appliance service activity. The value of this publicity feature is apparent from the widespread coverage it includes.

DISPLAYS UNDER RATIONING

Moreover, the war-created shortage of merchandise has made the dressing of show windows a problem. As a result the Electrical Association, realizing this, has developed an arresting window display which graphically imparts to the passerby the full spirit of the "Fix 'Em Up—Make 'Em Do" activity.

The central theme of the window display is a hospital building, atop of which is a sign identifying it as an "Electric Appliance Hospital." Entering the main door is a line of sad looking, worn-out, broken down electric appliances, while from the exit on the other side of the building emerges a line of bright looking, completely rejuvenated "ready to go back to work" appliances.

In that the "Fix 'Em Up—Make 'Em Do" leaflets provided by the association in 1942 proved very effective, the Association has developed another new and attractive leaflet for 1943. The leaflet stresses the "Check-Up" and "Fix 'Em Up—Make 'Em Do" services, and urges the reader to contact the neighborhood repair shop displaying the official signia of the Electric Appliance Service Plan, where expert service and fair prices may be relied upon. All the dealers have received a generous supply of these leaflets.

Approved repair dealers last year used over 200,000 letterhead and envelope stickers, and the Association has again supplied these in ample quantity. In addition, the Electrical Association is offering numerous other opportunities to all participating dealers under the Electric Appliance Service Plan.

$5 FOR ADVERTISEMENT

For the nominal sum of five dollars, a 16-inch advertisement, over the name of the individual dealer, will be placed in any Philadelphia neighborhood or suburban newspaper of the dealer's own choosing. Already, approximately 90 dealers have signed up to take advantage of this exceptional co-operative advertising offer.

The success of the Electric Appliance Service Plan locally has been nothing short of phenomenal. Originally conceived as a means of aiding the national war effort through the saving of vital materials, it has effectively accomplished this purpose and has likewise proven to be a timely, helpful service to the public through which the time and labor-saving benefits, as well as the health-conserving facilities of the already owned appliances, may continue to be enjoyed.

New Procedures For Relief of Small Plants Are Now Available Through Directories

CHICAGO—Smaller war plants in distress may expect relief through a newly devised collaboration plan for the spread of subcontracts, Colonel Robert W. Johnson, chairman of the Smaller War Plants Corp. and vice chairman of the War Production Board, announced at a recent meeting of the Illinois Manufacturers Costs Assn.

To effectively carry out the program, which will be country-wide, the SWPC, the National Association of Manufacturers, the National Industrial Council, and all state manufacturing and industrial groups will collaborate to smooth out and speed up the subcontracting process and to broaden the range of subcontracting activity.

In the collaboration program, all facilities available in the organizations involved will be utilized to determine the extent of distress now existing. Prime contractors will be given assistance by means of devices designed to bring together the prime and subcontractor. There are two ways, Col. Johnson pointed out, of bringing together the prime and subcontractor.

One way is through the Smaller War Plants Register and the other through the Directory of Contract Opportunities. The Register lists distressed plants and their facilities for handling contracts. The Directory lists prime contractors with precise description of machinery required, and the jobs open for subcontracting.

The Register is distributed to prime contractors and the Directory to subcontractors. Both books are alphabetized and regionalized so that in little time either prime or subcontractor can locate the place with which his requirements correspond.

The N. A. M. board of directors and Col. Johnson approve highly of this cross-reference and believe that all large manufacturers in the country should start using the method at once.

In addition to the collaboration organization itself, the directory, and the register, a full-time N. A. M. representative has been placed in SWPC Washington headquarters.

Col. Johnson feels that with these aids a great increase in the amount of subcontracting will be seen.

Crean Leaves Nema For Industial Position

NEW YORK CITY—R. B. Crean, controller and manager of the National Electrical Manufacturers Association's statistical and office service departments, plans to resign immediately after the spring meeting.

He will take up his new position as assistant to the controller of Baldwin Locomotive Works in Philadelphia.

Crean made his connection with NEMA in 1935 as assistant controller and at that time carried out assignments related to the operation of the N. I. R. A.

Robert Morse Will Head F-M Sales

* * *

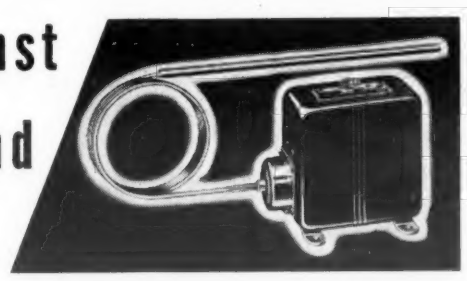
CHICAGO—Robert H. Morse, Jr. has been appointed general sales manager of Fairbanks, Morse & Co., it is announced. At the time of the appointment he was assistant sales manager.

Morse, Jr. started with the company in 1916, spent 10 years in the manufacturing divisions, then became sales manager of branches in Cincinnati, Dallas, and Boston, the announcement states.

He enlisted in the regular army in 1917 and saw service in France during the first world war. His oldest son, R. H. Morse, III, is now an Ensign in the United States Naval Reserve.

★AVRGAIRE

protects against SPOILAGE and SHRINKAGE

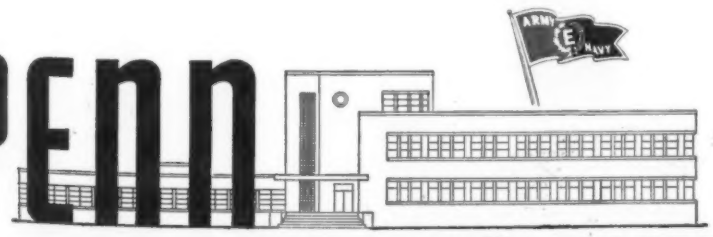


★ With our meat supply so critically short of all demands, any avoidable loss in storage amounts to sabotage. Penn Avrgaire is an effective weapon in the battle to save food because it automatically controls both temperature and humidity to provide double protection.

Designed for "above freezing" jobs in walk-in coolers and reach-in cases, Avrgaire holds temperatures closely at the selected level... maintains correct humidity... prevents both dehydration and excessive sliming, with their consequent shrinkage or trimming. Avrgaire delays defrosting when the box is under a heavy load and thus keeps temperature steady and avoids erratic short-cycling.

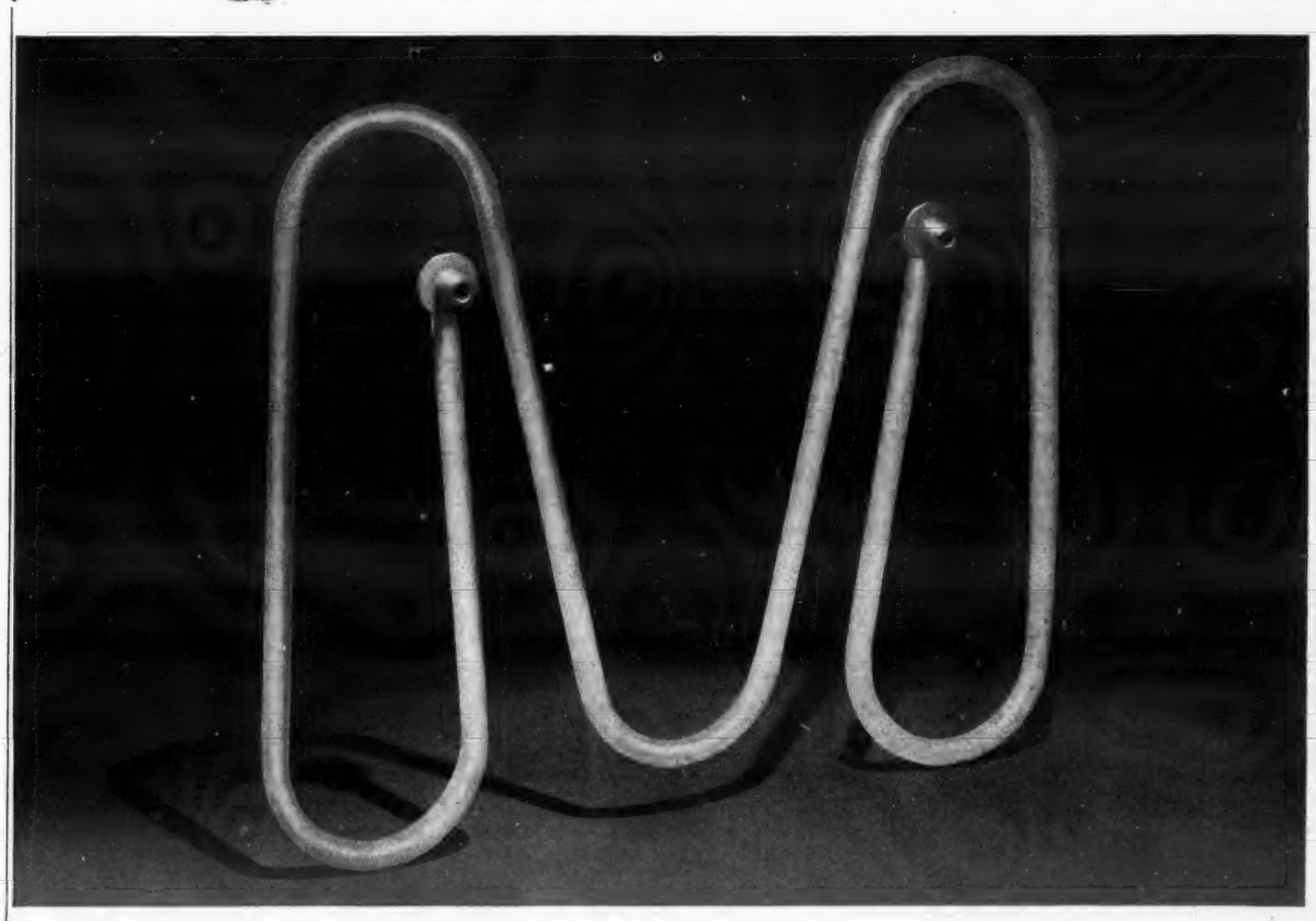
When existing controls cannot be made to function efficiently we are prepared to supply Avrgaire, and other Penn refrigeration controls, to meet the need for food preservation, under established priority rules. *Penn Electric Switch Co., Goshen, Indiana.* In Canada: Powerlite Devices, Ltd., Toronto, Ont.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS



Anything like this IN YOUR PLANT?

This odd-looking thing is a specially fabricated tubular part used in sterilizing equipment for Army field hospitals.

It is made of seamless copper tube, ⅝" in diameter and has a wall thickness of .035". After the part is formed to the desired shape (specified by the customer), special cast bronze fittings are brazed to both ends. Then the entire piece is electro-tin-plated.

Required for a definite purpose, it was designed by the user* in collaboration with Wolverine tube-fabricating engineers. All specifications are being met and the job is in production.

If this piece reminds you of a similar problem of yours involving tube or tubular parts, call Wolverine Tube Division for consultation and quotation. We have hundreds of standard tools already on hand for making parts and assemblies similar to the part shown here, along with a wealth of experience in handling seamless tube.

Or if you prefer to make the part yourself, call on Wolverine anyway as a source for tube that will be uniformly high in quality and possess the right properties for fabricating. Also consult our engineers regarding types of tools, methods, and techniques. Their talents and services are yours for no cost.

*Name of user on request.

DEFINITIONS

Extrusion Block—a cylindrical piece of cast metal—copper or brass—which has been cut from the original billet and prepared for extruding into seamless tube.

BUY WAR BONDS

CALUMET AND HECLA CONSOLIDATED COPPER COMPANY

WOLVERINE TUBE DIVISION

Seamless Copper — Brass

1413 CENTRAL AVENUE DETROIT, MICHIGAN

Text of Order Which Establishes Price Ceilings on Used Washers

Part 1380—Household and Service Industry Machines
[MPR 372]

Used Domestic Washing Machines

In the judgment of the Price Administrator, the maximum prices established by this Maximum Price Regulation No. 372 are and will be generally fair and equitable and will effectuate the purposes of the Emergency Price Control Act of 1942, as amended, and Executive Order No. 9250.

Maximum Price Regulation No. 372—Used Domestic Washing Machines

Section 1. **Sales and rentals of used domestic washing machines at higher than maximum prices prohibited.** (a) Regardless of any contract or other obligation, no person shall sell, rent, or deliver a used domestic washing machine to any other person at prices or rates higher than the maximum prices or rates fixed by this regulation, and no person shall agree, offer or attempt to do any of these things.

(b) Prices or rates lower than the maximum prices or rates may be charged.

Sec. 2. **To what products, transactions and persons this regulation applies—(a) What products are covered by this regulation.** This regulation covers sales and rentals of all domestic washing machines which have ever been used or which have been in the possession of one or more consumers for more than 90 days, or which are models of the year 1940 or earlier. A used domestic washing machine is a mechanically operated machine made for use in the home for washing clothes or other household fabrics.

(b) **What transactions are covered by this regulation.** This regulation covers all sales and rentals of used domestic washing machines by any person to any other person, including sales by an individual who is selling his own washing machine, and sales by dealers or auctioneers, except sales by a foreign seller to any domestic buyer. This exception includes domestic buyers who purchase through a bona fide agent.

(c) **What persons are covered by this regulation.** This regulation applies to any person who sells or rents a used domestic washing machine except foreign sellers and domestic buyers, insofar as they purchase from the foreign sellers. The term "person" includes: An individual, corporation, or any other organized group; their legal successors or representatives; the United States, or any government, or any of its political subdivisions; or any agency of the foregoing.

Sec. 3. **Maximum prices for sales of used domestic washing machines by all persons—(a) Standards for washing machines sold with a guaranty.** If the seller sells a used domestic washing machine and gives the purchaser a guaranty, the machine must meet the following standards. (The terms of the guaranty are set forth in section 3 (c)).

(1) Aluminum tubs must have been wire brushed and free from corroded spots. Copper tubs must have a full covering surface, on the inside, of tin or nickel plating. The exterior of copper tubs, when not protected by an outer wall or panel, must have been thoroughly cleaned and polished, and varnished or painted. Porcelain tubs must be free from chipped spots. A tub which has been chipped meets the standards of this paragraph providing the seller has repaired the chipped spot with forcelain cement which reasonably matches the color of the tub at the time of sale.

(2) The chassis, and all exterior metal parts of the machine must have been thoroughly cleaned and repainted, if worn, scratched, or rusty spots have appeared.

(3) All moving and motor parts shall have been carefully cleaned and lubricated.

(4) Wringer rolls must be of uniform diameter and free from badly worn spots.

(5) Operating mechanisms must be in good working order and capable of remaining so under ordinary use for the length of the guaranty period.

(b) **Machines sold without guaranty.** If the seller does not gives the purchaser a guaranty, the washing machine must be in working condition when delivered to the purchaser and if the machine is equipped with a wringer, the top and bottom wringer rolls must be of the same size.

(c) **Guaranty.** The maximum price for the sale of a used machine depends on whether the seller gives the purchaser a guaranty, and, if so, upon the length of the guaranty period. The guaranty to be furnished shall be a written guaranty for at least six months, or for one year or more, which provides that while the guaranty is in effect any part of the machine which proves defective will be replaced without charge for labor, materials or other services.

(d) **Table of maximum prices for used domestic washing machines.** With certain exceptions, the table below establishes maximum prices for used washing machines which are based not on the model or year of manufacture but on the features and specifications of the particular machine offered for sale. To find the maximum price, the machine must be identified as belonging in Class A, B, C, etc., by comparing the machine offered for sale with the specifications in the table below. The maximum price for any machine within a designated class shall be one of the three prices set forth for that class depending on whether the machine is sold without a guaranty, or guaranteed for six months or for one year. In certain circumstances additions to the maximum prices set forth below may be made because of special equipment furnished. These additions are contained in section 4. The maximum prices of the several classes of machines are set forth in the table below:

Class	Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
A	$34.75	$29.75	$10.00	$6.67
B	48.25	43.25	18.00	12.00
C	62.50	57.50	27.50	18.33
D	77.50	72.50	40.00	26.67
E	91.00	86.00	54.00	36.00
F	70.00	65.00	33.00	22.00
G	84.50	79.50	47.00	31.67
H	97.50	92.50	57.00	38.00
I	91.00	86.00	50.00	33.33
J	104.75	99.75	64.00	42.67
K	132.50	127.50	90.00	60.00
L	147.50	142.50	105.00	70.00

(1) A Class "A" machine is one which meets the following specifications:

(i) **Chassis frame.** All metal.

(ii) **Wringer.** Metal or wood frame equipped with safety release.

(iii) **Tub.** Porcelain, copper, aluminum, monel metal or stainless steel.

(iv) **Motor.** Electric or gas engine.

The maximum prices which may be charged for a Class A machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$34.75	$29.75	$10.00	$6.67

Wringer type washing machines failing to meet these minimum requirements of Class "A" shall sell for a maximum of $21.00 when sold with a guaranty of six months or more and shall sell for not more than $10.00 when sold without such guaranty.

(2) A Class B machine is one which meets the following specifications:

(i) **Chassis frame.** All metal.

(ii) **Wringer.** Metal frame equipped with safety release. Minimum diameter of rolls, 1⅞ inches.

(iii) **Tub.** Copper, aluminum, monel metal, stainless steel, or two or more coat porcelain finish. One coat or dark blue cobalt base porcelain coat is not acceptable in this class. Minimum capacity to waterline 12 gallons.

(iv) **Motor.** Electric motor or gas engine.

(v) **Gears.** Must be enclosed and operate in oil or grease unless tub of washer is cast aluminum.

(vi) **Agitator control.** Lever, button or switch. It must be possible to stop the agitator without stopping the motor.

The maximum prices which may be charged for a Class B machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$48.25	$43.25	$18.00	$12.00

(3) A Class C machine is one which meets the following specifications:

(i) **Chassis frame.** All metal.

(ii) Wringer. All metal frame equipped with push bar or lift type safety release; minimum diameter of rolls two inches; automatic water return drain board.

(iii) **Tub.** Aluminum, money metal, stainless steel, or two or more coat porcelain finish. One coat or dark blue cobalt base porcelain coat not acceptable in this class. Copper tub acceptable in vacuum cup or cylinder type models.

Minimum capacity to water line for washers of the vacuum cup or cylinder type models; 12 gallons. Minimum capacity for other types to water line; 12 gallons.

(iv) **Motor.** Electric or gas engine.

(v) **Gears.** Must be enclosed and operate in oil or grease unless tub of washer is cast aluminum.

(vi) **Agitator control.** Lever, button or switch. It must be possible to stop the agitator without stopping the motor.

The maximum prices which may be charged for a Class C machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$62.50	$57.50	$27.50	$18.33

(4) A Class D machine is one which meets the following specifications:

(i) **Chassis frame.** All metal.

(ii) **Wringer.** All metal frame equipped with push bar or lift safety release; minimum diameter of rolls two inches; automatic water return drain board.

(iii) **Tub.** Aluminum, monel metal, stainless steel, or two or more coat porcelain finish. One coat or dark blue cobalt base porcelain coat is not acceptable in this class. Copper tub acceptable in vacuum cup or cylinder type models. Minimum capacity to waterline for washers of the vacuum cup or cylinder type models—12 gallons. Minimum capacity for other types to waterline—15 gallons.

(iv) **Motor.** Electric or gas engine.

(v) **Gears.** Must be enclosed and operate in oil or grease.

(vi) **Agitator control.** Lever, button, or switch. It must be possible to stop the agitator without stopping the motor.

(vii) **Special equipment.** Two or more of the following features are required in Class D Models: Built in timer; built in thermometer; on and off switch; automatic motor cord reel; 2½-inch diameter rolls or larger; double wall tub; automatic roll stop which causes both rolls to stop turning when wringer pressure is released; square porcelain or aluminum tub; porcelain twin tubs; adjustable height legs.

The maximum prices which may be charged for a Class D machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$77.50	$72.50	$40.00	$26.67

(5) A Class E machine is one which meets one of the following sets of specifications:

(i) A washer with a square one piece cast aluminum tub with minimum water capacity of 17 gallons to the waterline and equipped with a cast metal frame wringer. Wringer rolls with a minimum diameter of 2½ inches. Single wringer control lever which locks wringer in position when rolls are operated. Double drain board with automatic water return board. A cast aluminum tub made of two pieces with the top section riveted to the main body of the tub is not acceptable in this class.

(ii) A washer with a white porcelain tub with a minimum water capacity of 20 gallons to the waterline, equipped with a metal frame wringer. Wringer rolls with a minimum diameter of 2¼ inches. Single wringer control lever which locks wringer in position when rolls are operated. Double drain board with automatic water return. Automatic load timer.

(iii) A washer with a square porcelain tub with a minimum water capacity of 17 gallons to the waterline also equipped with an automatic load timer and metal frame wringer with rolls having a minimum diameter of 2¼ inches. Automatic roll stop safety feature. Double drain board, and automatic water return.

(iv) A washer with a round porcelain tub with minimum water capacity of 17 gallons to the waterline also equipped with an on and off switch, over load switch, and a metal frame wringer with rolls of a minimum diameter of 2¼ inches and automatic roll stop safety feature. Double drain board and automatic water return. Washers of the vacuum cup type are acceptable in this class with a water capacity of 12 gallons to the waterline if all other specifications are met.

(v) A washer equipped with two tubs, both tubs having a water capacity of not less than 17 gallons to the waterline and with a mechanically driven washing agitator in each tub. A long skirt type frame which fully encloses both ends and extends from the tubs to a point just above the castors. Gears fully enclosed and operating in oil or grease. The wringer frame shall be cast aluminum, the rolls 2½ inches in diameter or larger. The wringer shall also be equipped with automatic water return board, automatic double roll stop causing both rolls to stop when pressure is released, and a pressure reset lever which sets the roll pressure at varying points.

The maximum prices which may be charged for a Class E machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$91.00	$86.00	$54.00	$36.00

(6) A Class F machine is one which meets the following specifications:

(i) **Chassis frame.** All metal.

(ii) **Water extractor.** Centrifugal spinner or pressure bowl type.

(iii) **Tub.** Porcelain, copper or stainless steel.

(iv) **Drain.** Automatic drain.

(v) **Motor.** Electric motor or gas engine.

(vi) **Gears.** Must be enclosed.

The maximum prices which may be charged for a Class F machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$70.00	$65.00	$33.00	$22.00

(7) A Class G machine is one which meets the following specifications:

(i) **Chassis frame.** All metal.

(ii) **Water extractor.** Centrifugal spinner type.

(iii) **Tub.** Porcelain, copper, or stainless steel. Minimum capacity to waterline 16 gallons except that in vacuum cup models 12 gallon capacity is acceptable.

(iv) **Drain.** Automatic drain.

(v) **Motor.** Electric or gas engine.

(vi) **Gears.** Agitator drive transmission must be enclosed and operate in oil or grease.

The maximum prices which may be charged for a Class G machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$84.50	$79.50	$47.00	$31.67

(8) A Class H machine is one which meets the following specifications:

(i) **Chassis frame.** All metal.

(ii) **Water extractor.** Centrifugal spinner type.

(iii) **Tub.** Porcelain or stainless steel. Minimum capacity to waterline 17 gallons, except in vacuum cup models 12 gallons is acceptable.

(iv) **Drain.** Automatic drain.

(v) **Motor.** Electric or gas engine.

(vi) **Gears.** Agitator drive transmission must be enclosed and operate in oil or grease.

(vii) **Special features.** In addition to the above, Class H washers must have two or more of the following features: Built in timer; built in thermometer; automatic cord reel; adjustable length legs; off and on switch; long leg frame construction; top bearing in extractor basket; over load switch; extractor cover equipped with a safety lock to make it impossible to open water extractor while it is in motion; extractor water valve for direct connection with hot water system for the purpose of rinsing clothes while in extractor; white porcelain tub with 20 gallons, or greater, capacity to waterline.

The maximum prices which may be charged for a Class H machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$97.50	$92.50	$57.00	$38.00

Automatic and Semi-Automatic Washing Machines

(9) A Class I machine is one which meets the following specifications:

Bendix semi-automatic type standard model without cabinet.

The maximum prices which may be charged for a Class I machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$91.00	$86.00	$50.00	$33.33

(10) A Class J machine is one which meets the following specifications:

Bendix semi-automatic type deluxe model in cabinet.

The maximum prices which may be charged for a Class J machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$104.75	$99.75	$64.00	$42.67

(11) A Class K machine is one which meets the following specifications:

Bendix home laundry fully automatic type standard model, without cabinet; Blackstone automatic type model No. 50; ABC-O-Matic model No. 180.

The maximum prices which may be charged for a Class K machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$132.50	$127.50	$90.00	$60.00

(12) A Class L machine is one which meets the following specifications:

(Concluded on Page 19, Column 1)

WANTED

Nationally known manufacturer requires the services of two technically trained refrigeration field sales representatives for Eastern territories. Salary and expenses. Excellent possibilities for the right type men post-war. Give draft status and business background. Our own men have been advised of this advertisement.

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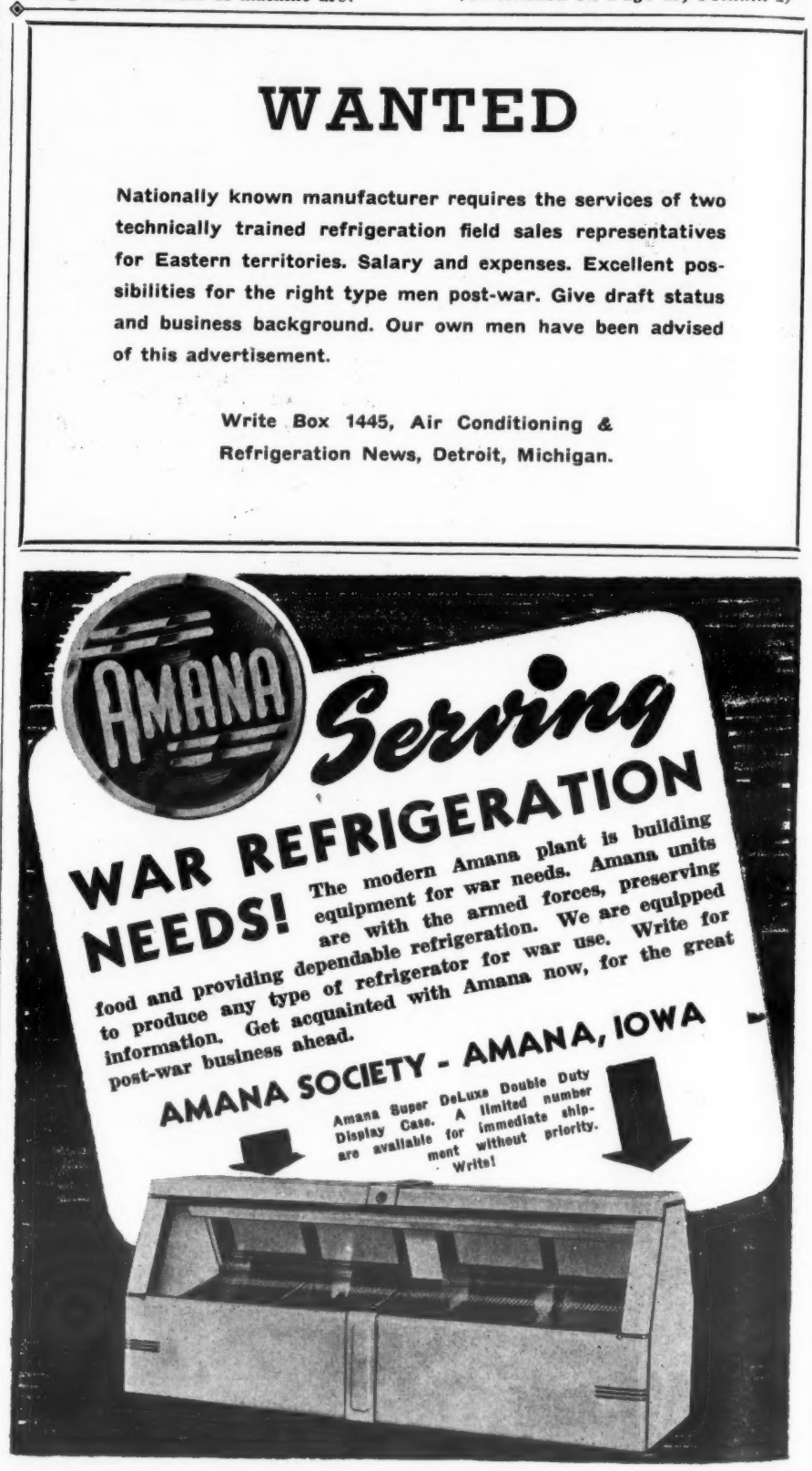
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How Prices Are To Be Established For Used Household Washing Machines

(Concluded from Page 18, Column 5)

Bendix deluxe home laundry fully automatic type in cabinet; Westinghouse fully automatic type.

The maximum prices which may be charged for a Class L machine are:

Guaranteed for 12 months or more	Guaranteed for at least 6 months	Not guaranteed To consumers	Not guaranteed To dealers
$147.50	$142.50	$105.00	$70.00

Sec. 4 **Additions to maximum prices—** (a) **Mechanical drain pumps.** There may be added to the maximum prices of Class A, B, C, D, and E machines, $5.00 when such machines are equipped with mechanical drain pumps.

(b) **Gasoline engines.** There may be added to the maximum prices of all machines, $12.00 when such machines are equipped with a gasoline engine.

Sec. 5 **Taxes.** Any tax upon or incident to the sale of a used domestic washing machine may be added to the maximum prices established by this regulation.

Sec. 6 **Sales for export.** The maximum price at which a person may export any used domestic washing machine is established by the provisions of the Second Revised Maximum Export Price Regulation.

Sec. 7 **Credit, delivery and other charges.** Any charge which is not quoted and billed separately shall for the purposes of this regulation be considered to be part of the selling price of the washing machine. Charges for the extension of credit or for delivery may be added to the maximum retail price set forth in this section, only if: (a) the seller during March, 1942, made a separate charge for the extension of credit, or for delivery, the amount of which was separately stated to the purchaser, (b) the amount charge for the extension of credit or for delivery is not in excess of the charge in effect during March, 1942, upon sales of used domestic washing machines, and (c) such charges are quoted and billed separately. No seller may require as a condition of sale that the purchaser accept any of the services mentioned.

Sec. 8 **Maximum prices for the rental of used domestic washing machines—**(a) **Rental rates.** The maximum price for the rental of a used domestic washing machine shall be $4.50 for the first month, and $3.50 for each month thereafter. These rates shall include delivery and pick-up, and all other incidental services. No additional charges are permitted.

(b) **Meter-equipped washers.** Rental rates for meter-equipped washers shall not exceed the highest rates charged by the lessor during March 1942. Lessors of meter-equipped washers who were not engaged in the business of renting meter-equipped washers during March 1942 may not charge more than 10 cents for each 30 minutes of use.

Sec. 9 **Maintenance of rented washing machines.** A rented washing machine must meet the standards set forth for a used domestic washing machine sold with a guaranty in section 3 (a) (1) and during the period of the rental any part of the machine which proves defective must be replaced without charge for labor, materials or other services.

Sec. 10 **Rental payments in advance.** A person who supplies a washing machine may not ask for or receive rental payments for more than three months in advance.

Sec. 11 **Prohibited practices.** (a) Any practice which is devised to get the effect of a higher than ceiling price without actually raising the dollar and cents price, is as much a violation of this regulation as an outright over-ceiling price. This applies to devices making use of commissions, services, transportation arrangements, tying agreements, tying requirements, trade understandings and the like.

(b) The following practice is specifically prohibited:

(1) Offering to sell or rent a used domestic washing machine only on condition that the buyer agree to pay for repairs, parts, and services.

Sec. 12 **Tagging.** No person shall sell or offer to sell, or rent, a used domestic washing machine in the course of trade or business unless a tag is attached to the washing machine which indicates the length of the guaranty to be supplied, the class into which the washing machine falls as set forth in this regulation, and the maximum selling price; and if the washing machine is offered for rent, the tag shall also state the maximum monthly rental rates. A tag in the following form is satisfactory.

Class .....
Guaranteed for .....
Maximum selling price.....
(Maximum monthly rental rate).....

Sec. 13 **Sales slips, receipts and invoices.** Every person selling a used domestic washing machine in the course of trade or business shall furnish the purchaser with a sales slip, receipt, invoice or other writing, stating the length of the guaranty supplied, the date of the sale, the class, the price charged, the nature and amount of any additional charges, and the name and address of the purchaser. If any amount was added to the maximum price on account of a gasoline engine or mechanical drain pump, this shall also be stated. A copy of such sales slip, receipt, invoice, or other writing shall be retained by the seller or inspection by the Office of Price Administration.

Sec. 14 **Enforcement.** (a) Persons violating any provisions of this Maximum Price Regulation No. 372 are subject to the criminal penalties, civil enforcement actions, and suits for treble damages provided for by the Emergency Price Control Act of 1942.

(b) Persons who have evidence of any violation of this Maximum Price Regulation No. 372 or any price schedule, regulation or order issued by this Office of Price Administration or of any acts or practices which constitute such a violation are urged to communicate with the nearest field or regional office of the Office of Price Administration or its principal office in Washington, D. C.

Sec. 15 **Registration and Licensing.** The registration and licensing provisions of §§ 1499.15 and 1499.16 of the General Maximum Price Regulation applies to every person subject to this regulation selling used domestic washing machines at retail.

Sec. 16 **Petitions for amendment.** Persons seeking any modification of this Maximum Price Regulation No. 372 or exception not provided for therein may file petitions for amendment in accordance with the provisions of Revised Procedural Regulations No. 1, issued by the Office of Price Administration.

Sec. 17 **Applicability of the General Maximum Price Regulation.** The provisions of this Maximum Price Regulation No. 372 supersede the provisions of the General Maximum Price Regulation with respect to sales and deliveries for which maximum prices are established by this Maximum Price Regulation No. 372.

Sec. 19 **Geographical applicability.** The provisions of this Maximum Price Regulation apply to the 48 states, the District of Columbia, and the territories and possessions of the United States.

Note: All reporting and record-keeping requirements of this regulation have been approved by the Bureau of the Budget in accordance with the Federal Reports Act of 1942.

This regulation shall become effective May 3, 1943.

Issued this 26th day of April 1943.

Prentiss M. Brown, Administrator.

Anchor Distributing Lists New Kinds of Lines

PITTSBURGH — Harold W. Goldstein, president of Anchor Distributing Co., announces the addition of several new lines of merchandise as an accommodation to retailers in rebuilding stocks.

On display in their recently remodeled show rooms are ice refrigerators, Victory model gas ranges, and coal heaters.

New variety items acquired include toys, games, dolls, pictures, and a complete glassware, china and gift display.

Anchor's announcement states that the company is making a permanent place for these lines and expects to continue with their sale during the post-war period, in the meantime supplying retail outlets with quick-turn-over merchandise.

New N.R.S.J.A. Head Sees a Bright Future

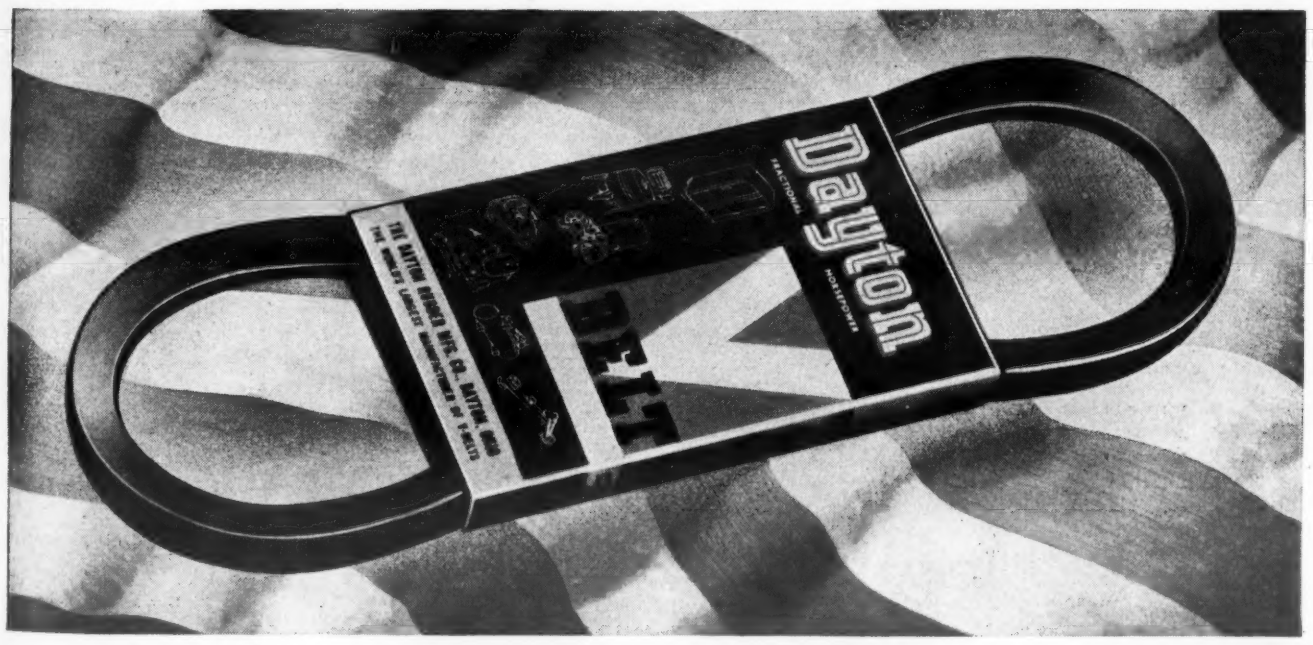
Harry Alter of the Harry Alter Co., Chicago, newly elected president of the National Refrigeration Supply Jobbers Assn., addresses the association's recent convention. Elsewhere in this issue is given the text of Mr. Alter's remarks, in which he speculates on a postwar refrigeration boom.

Contractors Hampered By Lack of Welders

RICHMOND, Va.—A lack of welders is one of the principal worries of the Heating, Piping and Air Conditioning Contractors Assn., George P. Nachman, national president of the group, asserted at the annual convention of the Virginia Associated Plumbing and Heating Contractors, Inc. in Hotel John Marshall, April 19 and 20.

However, Mr. Nachman said there had been great effort to do away with this worry by the opening of a training course for welders sponsored by the heating association.

More than 200 delegates attended the conclave which was welcomed by Mayor Ambler of Richmond. All sessions were presided over by W. J. Baumbach, president of the State Association.



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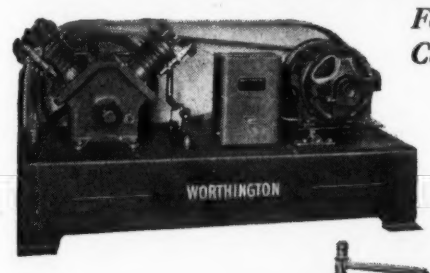

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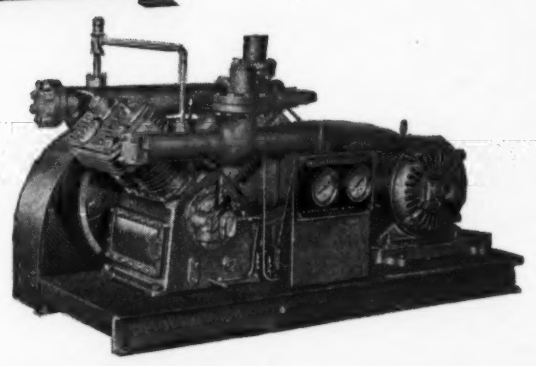

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Postwar Boom Seen For Supply Jobbers, But Problems Loom Up Too

Alter Cites Reasons Why Chances For Refrigeration Boom Are Especially Good

By Harry Alter, president, the Harry Alter Co., and president, National Refrigeration Supply Jobbers Association

When Peace with Victory finally settles over this war-torn earth, and, God speed the happy day, I expect as in 1918 there will be a rather chaotic period of several months during which all peoples will struggle with the inevitable problems connected with readjustment to our peace-time economy.

In the refrigeration and air-conditioning industry readjustments will be made more speedily than in many other industries. One reason is that most producers are now devoting and will continue to devote a good part of their facilities to the manufacture of essential refrigeration equipment. Thus, conversion to peace time production won't be the same severe problem as that which will confront the automotive, the railroad car, or household refrigerators manufacturer, who is now manufacturing products completley foreign to his normal custom.

So I firmly believe that large scale production of commercial refrigeration equipment will be resumed by manufacturers in a relatively short space of time. Most certainly this will be highly desirable because, returning soldiers can be more quickly employed in our industry and that will be a real contribution to post-war prosperity.

But, what of the post-war market for refrigeration equipment? If our factories do get into speedy production, will their output be readily absorbed? To these questions I am convinced there is only one answer, a loud, positive and decisive "yes," I believe the market will take refrigeration and air-conditioning equipment as fast and in as large amounts as our factories can build the stuff.

The reasons are readily apparent:

First: An enormous public cash buying power.

Second: An equally enormous buying power, and definite need among retail merchants.

Third: Such technical improvements in design and performance (as a result of war time developments) that old equipment will be rapidly obsoleted.

SEES FROZEN FOODS BOOM

Fourth: A definite change in the food buying habits of the people. On the last point I am thinking of course, of the amazing possibilities of frozen goods. I think that after the war frozen goods will be cheaper than fresh foods—that the cost of distributing frozen foods will be less than the cost of distributing fresh foods, because of their shrinkage, spoilage, bulk, and system of marketing.

Now if frozen foods will cost so much less than fresh foods, I am sure the public will want them especially, when the quality, convenience and variety in and out of season, is considered. So we can only come to one conclusion: frozen food storage cabinets of all sizes, will be in tremendous demand for years to come.

Likewise, other types of refrigeration equipment will sell in enormous quantities. Think of the tens of thousands of ice cream cabinets that will be needed when normal ice cream consumption is renewed, and when retail drug and confectionary stores will require them once again.

The new L-38 order that appears to painful to many of us today has its brighter side since it is actually building up a terrific pent-up pressure of post-war buying power for all equipment frozen today.

Then fields of refrigeration and air-conditioning uses that I have not touched upon at all will present undreamed of sales opportunities. Consider the war-time birth of air-conditioning and refrigeration for industrial processing. Who can forsee to what vast sales that alone will lead to?

We jobbers in the business of distributing parts and supplies may have to adjust ourselves to the changes sure to follow as a result of this post-war boom.

Many of the things we now sell and consider important lines, five years hence, may be of no consequence. The trend towards larger capacity hermetic compressors some day will bomerang on our sales unless we change also. Certainly as more and more domestic and commercial units of the hermetic type are introduced, items we now sell in large quantities like shaft seals, belts, compressor parts, expansion valves, etc. will show a proportionate decline in demand.

The ability of the jobber, dealer, and service man to adjust himself to these changes, will be the deciding factor in his success or failure.

country. We owe them more than a moral obligation. We owe them our very existence as a democracy. Be ready when they return to offer jobs with decent pay. Many of the younger men who left as single men have since married and have family responsibilities on their shoulders. It is only reasonable to assume that these men—now fighting on foreign soil—are giving some thought to the job they left behind them and whether or not it will be waiting for them.

Naturally, there are many cases where such a job availability is impossible, particularly where more than one has gone through the same job. That is where we should take stock of the people to whom we can offer a job, even at the expense of disturbing our present organizations.

Women should be displaced from what we consider a man's work, and married women with other income earners in the family should be displaced by single women. Our present organizations should be maintained with the future in mind.

With the first easing of restrictions we should immediately place our house in order—build your personnel so that you are actually operating a business and not spending your time on detail clerical or shop work.

Review your shop—its equipment and appearance. Your facilities should be both efficient and attractive. Some form of catalog is almost a "must" for every jobber. Inventories should be overhauled and the gaps filled up.

Another condition certain to be with us again is that of greatly expanded credit accounts, whether granted voluntarily or as a competitive measure. There will be countless new-comers in the field of refrigeration service and naturally the majority will seek cerdit. Unfortunately they will have little, if any, ability to pay other than from income on jobs they expect to do. For the best interest of yourself and those seeking credit—say "No" when you realize it is the only correct answer.

STICK WITH YOUR FRIENDS

We will probably be deluged by new lines and high pressure salesmen. Do not bite at everything that is offered. Your customers depend upon you to offer honest products. Do not forget the manufacturers who have fought through this period with us and for us. They did not pursue the easiest road by any means and had to battle for materials for us to sell.

War contracts with high priorities were open to all, but many of our sources of supply realized the urgent need for civilian refrigeration and maintained deliveries to us on ratings of little or no value because they had the welfare of the industry at heart. They deserve our whole-hearted support when the market is again flooded with many trade brands.

We must, however, recognize that some manufacturers were caught by the issuance of various Limitation Orders, that froze their raw materials that were not in a fabricated state. Others were in the position of being in possession of facilities that were limited to one or two manufacturers. High-rated Army and Navy orders for those particular refrigeration devices were thus forced on limited production facilities in such volume that lower rated civilian orders were never reached. We should recognize all conditions fairly.

Be prepared for additional competition. It is bound to come. Let us do everything possible to keep it an orderly competition. Lay a good foundation now by building up customer goodwill. Too many of us are prone to let the irritations incident to operating a business be reflected in our customer contacts. This is particularly so if the customer is not aware of certain restrictions or does not have a high priority to offer. Let us all remember that customer goodwill is to be more important in the market-to-come than ever before. Let us be helpful in all cases, keeping in mind that some day we will want that customer's loyalty.

No one doubts that we will see radical changes in the material available for us to sell. There will be new products and new—large and important—manufacturers in the field. Some will probably set up their own chains of distribution. Today highly specialized industrial installations will demand supplies not heretofore carried by jobbers.

We must be awake to all of these factors if we are to go forward and maintain a leading position in the distribution of refrigerating equipment and supplies.

Borden Cites Problems Likely In Return To 'Peacetime' Business

By C. E. Borden, president, the A. E. Borden Co. and past president, National Refrigeration Supply Jobbers Association

Any attempted projection of conditions to be met at the close of the present war must be influenced by certain anticipated conditions. Furthermore, such projections should include more than an estimate of market conditions or materials to be sold.

Some of the factors will develop through an interim period. Supposedly, from the distribution of our armed forces and resources, we will dispose of the European phase of the war first. That phase is accounting for a much larger proportion of our men and materials than the war with Japan and it is reasonable to assume that when actual hostilities cease in Europe, there will be a partial easing of restrictions and demobilization of manpower.

However, even after completion of our activities in the Pacific, we must not expect resumption of peace time conditions as we once knew them. Indications are that efforts toward a "planned economy" will be renewed with Federal control being maintained as at present over all important raw materials.

Our production facilities will be the only extensive source from which the rest of the globe can be rehabilitated and retooled. That will mean continued channeling by our government of metals, minerals, chemicals and food. That will not be at the expense of private enterprise to the extent that we will not have equipment and accessories to sell, but it will be some time before the market again becomes a buyers market.

OBLIGATION TO EMPLOYES

We must be thinking of the men and women who have left our organization to enter the service of our

a big job in food is a vital fighting weapon

Help Wanted

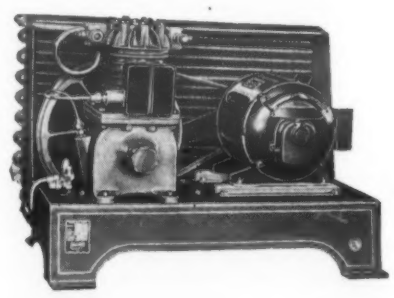
FOOD SABOTEURS—Experience unnecessary. Ability to let food spoil is essential. Army-Navy-Luftwaffe "卐" will be awarded for competent neglect of proper refrigeration. American patriots need not apply. Bund membership desirable, but not necessary.

SWASTIKA & RISING SUN, INC.

Today, food spoilage is more than just uneconomical . . . it's downright dangerous to our chances in this war. Food is a vital fighting weapon on *all* the fronts . . . yes, even the Home Front!

You men who are responsible for the protection as well as the production of American food supplies know better than most how grave that responsibility is. You who depend on Brunner condensing units and refrigeration equipment are finding Brunner a reliable standby.

When this world-wide "unpleasantness" is a matter of past history, you'll still have a big job on your hands. Please remember that the entire Brunner organization . . . men *and* machines . . . will back you up as ever. That has always been our job . . . and we like it that way!



ARMY E NAVY

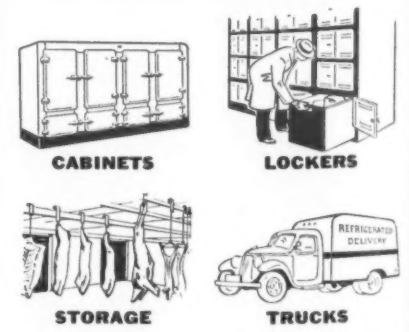
BRUNNER

COMMERCIAL REFRIGERATION

BRUNNER MANUFACTURING CO., UTICA, N. Y., U. S. A.

BUILT-IN PROFITS!

Here you see Gold Bond Zerocel being installed in a large frozen foods warehouse, designed for a maintained temperature of −10°. When this job was specified, Zerocel was the natural choice for the insulation. It has an extremely low thermal conductivity. It's physically and chemically stable, which makes it moisture-resistant and completely odorless. Immune to fungi and vermin. Nor will it sag or settle even under severe vibration. Best of all it costs ⅓ less to use!



WRITE TODAY FOR FULL STORY on efficient, low-cost Zerocel. Our staff of insulation engineers will be glad to make recommendations on specific problems. Address Industrial Sales Division, National Gypsum Company, Buffalo, New York.

GOLD BOND ZEROCEL

NATIONAL GYPSUM COMPANY, BUFFALO, N. Y.

Wisconsin Locker Operator's 'Sales Talk' Shows How Plant Actually Aids War Effort

Eliminates Waste In Time, Food and Rubber, He Says

LA CROSSE, Wis.—Now that the long-discussed meat rationing has become an actuality, George Philips is keeping all of his 500 frozen food lockers in the Polar Chest Frozen Food Locker Plant here in constant use by educating his customers about the intensified advantage of using the lockers in wartime.

"Using the frozen food locker for storage is not hoarding," Philips explains to his customers. "The average locker's supply will be used in a short time, so that no great amount of food can be kept beyond the immediate needs."

This plant, the largest in La Crosse, assists local residents, particularly farmers, in meeting the tightening pinch of rationing by allowing them to store their rationed amount for equal distribution over the ration period.

Philips points out that customers are quick to use the advantages of the lockers when he tells them how the lockers preserve the nutritional qualities in food, eliminates waste by spoilage in home butchering, and in general, preserves home grown food for future use.

RELIEVES OTHER FACILITIES

Every pound of food, especially meat, preserved in local frozen food lockers relieves the country's transportation system and food processing industry, both overloaded by war production and hampered by rubber and labor shortages, he declared.

The Polar Chest Frozen Food Locker Plant here is the only one in Wisconsin that features the hoist-type of self-service lockers, according to Philips. A tier of five lockers, the bottom one a drawer, is contained in a chest beneath the floor of the plant. A push on the proper button by the customer automatically raises or lowers the chest of lockers as desired.

When meat is brought into the plant it goes to the "chill room" until all animal heat has disappeared. Beef stays in the "aging room" for one to two weeks before it is processed, although pork is cut up the next day.

After the meat has been cut up according to customer specifications, it is placed overnight in the sharp-freeze compartment, where the —30° temperature seals the original food value into the meat until it is ready for use. From there is is placed in the locker.

PLANT OPERATING DETAILS

A rubber stamp labels each package of meat with the date it is placed in the locker, locker number, and kind of meat to facilitate easy handling.

Dole vacuum plates are used throughout the plant, as Philips finds them more efficient than pipes. The lockers are capable of storing 225 pounds of food.

Here in this community farmers particularly are flocking to take advantage of the lockers, for, while the butcher shops may not be able to supply their needs, they may butcher and store meat sufficient for their own use.

According to informed estimates, says Philips, 4,500 locker plants now are in operation throughout the nation to serve nearly 1,250,000 families. It is easy to schedule production so that 600 pounds of food a year could be put through the locker, representing a total production of 750 million pounds annually, he said.

Philips emphasizes to his customers that smart locker users keep their lockers in constant operation the year around, pointing out that the more food passing through the locker, the greater is the saving by its use.

INSTALLATION AT CAMP McCOY

In addition to owning the locker plant, Philips operates the Philips Appliance Co. in La Crosse, which installs locker plants in Wisconsin and Minnesota.

The company recently installed a walk-in cooler in the hospital unit at Camp McCoy, located approximately 35 miles from the city. At present Philips is fulfilling a contract for an overhead track in the large meat refrigerator at the Camp McCoy main unloading plant.

Auto Parts Industry To Get 100% Of Materials Request

WASHINGTON, D. C.—Additional allocation of materials for automotive replacement parts for the second quarter of 1943 will give the industry almost 100% of the amounts requested for that period, the Automotive Replacement Parts Industry Advisory Committee learned at its recent meeting in Washington with officials of the War Production Board and other government agencies.

Eighty-five per cent of the alloy steel requested by the industry for the second quarter of 1943 has now been allocated. The industry has also received the full requested amounts of carbon steel and copper, with the exception of copper wire. Allocation of copper wire was 90% of the amount requested.

According to government officials, CMP-4B applications show that large percentages of replacement parts are being made for military use. This situation was borne out by the committee's report of an increase in military purchase orders from civilian inventories, especially during the first three months of 1943. These unexpected emergency purchase orders from the armed forces, committee members said, have made it difficult to forecast the amount of materials needed in order to maintain distributors' stocks so that both civilian and emergency military needs can be satisfied.

The Chassis Parts Sub-committee submitted a report on a standardization program for springs and spring leaves which had been worked out in cooperation with the Automotive Division, recommending reduction in the number of sizes of spring leaves from 186 to 76. The report is being submitted to the Automotive Industry Advisory Committee for study and approval.

Sleeve-bearings have been assigned to the Automotive Division, the committee was informed, and an industry advisory committee will probably be set up for this segment of the automotive replacement parts industry.

The committee was also informed that crankshafts are critical common components subject to scheduling under General Scheduling Order M-293, and that the Automotive Division is working out delivery schedules that will dovetail with actual requirements for crankshafts.

The committee was asked to report to the division any instances of automotive parts intended for export which are being held in warehouses or at ports because of lack of shipping space.

Seed Store Also Sells Preserved Dog Food

BIRMINGHAM, Ala.—Now refrigerated dog food is being sold by H. G. Hastnings' seed store in this city. Its featured product for canines is kept in a "help-yourself" cooler located up front. The idea is that the product is kept fresh under refrigeration and that the dog will like it better.

Plumbing Dealers Ask Ratings For Replacement Units

WASHINGTON, D. C.—The importance of providing a more workable means whereby plumbing and heating repair and replacement items can be obtained by the civilian was stressed by members of the Plumbing and Heating Distributors Industry Advisory Committee.

Committee members urged the establishment of a preference rating sufficiently high to enable the distributor to obtain repair parts and complete replacement units.

They also urged that certifications to obtain repair parts call for signature by the consumer only. This certification would be retained in the files of the person selling the repair part to the consumer.

The members also recommended that certification covering a complete replacement unit be strengthened and the order so written that this certification would be forwarded to the distributor, who would retain it in his file for possible inspection by the WPB Compliance Division. It was suggested that such certifications be signed by consumer and installer, and that complete replacement units for which this certification is necessary should be enumerated in a definite list which should be part of a formal WPB order.

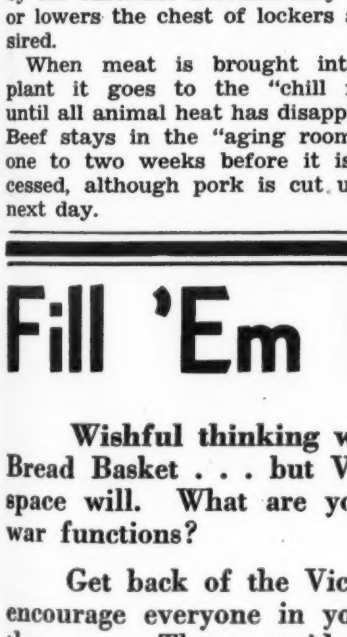
The committee urged a revision of Order L-79 to permit wholesalers and plumbers to dispose of slow-moving deluxe type equipment.

Fill 'Em Up-Both Ways

Wishful thinking won't help fill up your Community Bread Basket . . . but Victory Gardens and adequate storage space will. What are you doing to promote these two vital war functions?

Get back of the Victory Garden Program vigorously and encourage everyone in your community to put up everything they can. Then provide adequate storage space by utilizing that room you have for expansion. Do it Now—tomorrow may be too late. Install the

MASTER FOOD CONSERVATOR



for permanence. Use the unit that matches your present drawers and door fronts. Built to last—not a substitute. Buy years of service.

Write, Phone or Wire

Prompt shipment of your requirements will be made. Order today and safeguard your investment by installing MASTER—the first cost—last cost unit.

Endorsed by and sold through distributors of refrigeration and insulation.

Master Manufacturing Corp.
121 Main St. Sioux City, Iowa

Over 300,000 Master Food Conservators in Use

FAMOUS LIFE LINES

1 TRANSOCEANIC CLIPPER SERVICE, life line of rapid communication with our allies and with neutral nations all over the world, has reduced to a matter of hours travel which formerly took days and even weeks, thus contributing materially to our successful military operations.

Pan American Airways System Photo

2 THE FLYING FORTRESS, like other American warplanes, is serviced by a veritable network of life lines by Bundy—used either structurally or for transmitting liquids and hydraulic pressure in practically all the specialized motor vehicles and ground service equipment of the Air Force.

Official Photograph, U. S. Army Air Forces

TODAY'S AIR WAR moves at a dizzy pace; yet the cry is always for *more speed.*

We know men will not fail — and machines *must* not. Here at Bundy we keep that in mind, as we turn out mile on mile of vitally needed tubing to help "keep 'em flying."

Primer lines for aircraft engines; propeller control, de-icer and hydraulic tubing; structural tubing for airframes. Gas, oil, brake and pressure lines for the many types of vehicles and equipment needed to service our warbirds on the ground.

Life lines of Bundy Tubing are serving the Navy and Ordnance, too. They carry hydraulic pressure to tank turrets, fuel and oil to Diesel motors, refrigerants to the powder rooms of fighting ships.

Still, we are constantly meeting *new* demands for tubing—adjusting to new war uses. *We'll keep it coming!* And we promise that every foot of it shall be the best Bundy can build. Bundy Tubing Company, Detroit, Michigan.

Photo by U. S. Army Signal Corps

2½ TON, 6 x 6, SIGNAL CORPS VAN —Vehicles like this, and practically every other type of automotive equipment used by our armed forces, have many Bundy Tubing "life lines" —gas lines, brake lines, booster brake tubes, oil tubes, hydraulic control equipment, and an average of more than fifteen other tubing parts.

Buy U. S. War Bonds
Get in Your Scrap

BUNDY TUBING

ENGINEERED TO YOUR EXPECTATIONS

BUNDYWELD double-walled steel tubing, hydrogen-brazed, copper-coated inside and outside. From Capillary sizes up to and including ¼" O. D. This double-walled type is also available in steel, tin-coated on the outside, and in Monel.

BUNDY ELECTRICWELD steel tubing. Single-walled — butt welded — annealed. Available in sizes up to and including 2" O. D. Can be furnished tin-coated outside in smaller sizes.

BUNDY "TRIPLE-PURPOSE" tubing. Double-walled, rolled from two strips, joints opposite, welded into a solid wall. Available in all Monel; all steel; Monel inside—steel outside; Monel outside—steel inside. Sizes up to and including ⅝" O. D.

PATENTS

Weeks of April 6 & 13

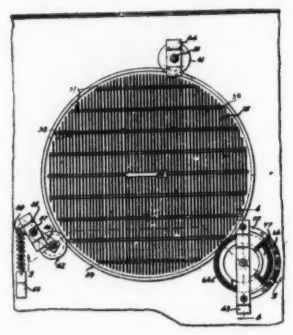
2,315,517. CONDITION CONTROL SYSTEM. Theodore K. Greenleo, Rockford, Ill., and Gerald W. Bohn and Cortland N. O'Day, Port Washington, N. Y., assignors to Barber-Colman Co., Rockford, Ill., a corporation of Illinois. Application March 7, 1936, Serial No. 67,612. 10 Claims. (Cl. 257—3).

1. In an air conditioning system having an air duct communicating at its outlet end with the space to be conditioned and having fresh and return air inlets, damper means controlling the proportion of fresh air admitted to said duct, a power operator for said damper means, a thermostat responsive to the temperature of the mixture of fresh and return air and controlling said operator to modulate the position of a damper means between said minimum open position and fully open position and maintain a substantially uniform temperature of the mixture, a thermostat responsive to the temperature of the fresh air exercising control over said operator superior to said first mentioned thermostat and operating to cause movement of said damper means to said minimum open position in response to a deviation in the fresh air temperature to a predetermined value, and auxiliary control means operable independently of said thermostats to control said operator and cause complete closure of said fresh air inlet from any position in which the damper means is disposed at the time the auxiliary control means is rendered active.

2,315,603. COMBINATION REFRIGERATOR AND AERATOR. George B. Duncan, Washington, Mo., assignor to Star Bucket Pump Co., St. Louis, Mo., a corporation of Missouri. Refiled for abandoned application Serial No. 200,786, April 7, 1938. This application Sept. 5, 1941, Serial No. 409,753. 3 Claims. (Cl. 31—4).

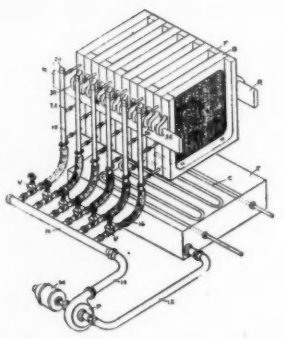
1. In a device of the character described, a cabinet having insulated top, bottom, side and rear walls, and an insulated door for the front of the cabinet, said cabinet having the side and top walls thereof extended, and the rear wall thereof terminating short of the top wall and merging into a horizontal, rearwardly extending wall extension forming with the aforementioned wall extension at the back of the cabinet a domestic storage compartment, a hinged door for said storage compartment, a refrigerating device arranged within the cabinet at the back of the latter and including a casing the upper portion of which forms the rear wall for the domestic storage compartment, an aerator, means supporting the aerator for movement into and out of the cabinet, said aerator including a conduit for a refrigerant, and means operatively connecting said conduit with the aforementioned refrigerating device.

2,315,667. REFRIGERATING APPARATUS. Nelson J. Smith, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Feb. 28, 1940, Serial No. 321,294. 5 Claims. (Cl. 98—40).



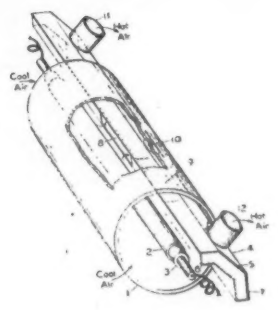
1. An air conditioner including a cabinet having a wall provided with a discharge aperture, air conditioning means within said cabinet, air circulating means for drawing air into the cabinet passing it through the air conditioning means and discharging it through said aperture, and adjustable air directing means comprising a grille having a plurality of air directing vanes, a track for supporting said grille, a plurality of spaced rollers in engagement with the outer periphery of said track and including means for rotatably supporting said track and said grille adjacent said aperture, a fixed pivot for one of said rollers, a floating pivot for another of said rollers, means for biasing said floating pivot radially toward the center of said grille, and manipulating means having a driving engagement with said track to cause rotation of said grille upon operation of said manipulating means.

2,315,768. REFRIGERATING APPARATUS. Algernon R. Burnette, New York, N. Y., assignor to John Edward Fox, New York, N. Y. Application July 15, 1941, Serial No. 402,445. 16 Claims. (Cl. 62—114).



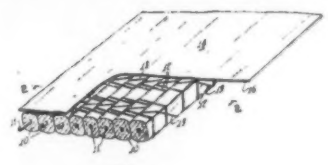
1. Refrigerating apparatus comprising, in combination, support means; a series of freezing plates mounted on said support means in spaced relation to each other and adapted to direct refrigerant onto food products to be frozen; and interchangeable spacing means each interposed between a pair of said freezing plates, said spacing means being adapted to contain food products to be frozen and to receive refrigerant from said freezing plates.

2,315,829. COOLING APPARATUS. Frederick O. Trump, Binghamton, N. Y., assignor to General Aniline & Film Corp., New York, N. Y., a corporation of Delaware. Application March 11, 1942, Serial No. 434,209. 5 Claims. (Cl. 95—77.5).



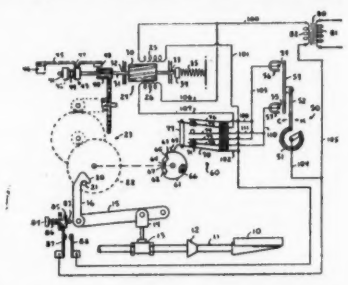
1. In an apparatus for printing light-sensitive material having a transparent printing surface and a light source, a hollow box having angularly disposed sides, a plurality of intake openings in the geometric center of the surfaces of said box, and exhaust openings adapted for attachment to suitable suction means, the total area of said exhaust openings being approximately equal to the total area of the intake openings.

2,315,837. INSULATING COVERING. George B. Brown, Martinsville, and Phillip D. Cannon, Warren Township, Somerset County, N. J., assignors to Johns-Manville Corp., New York, N. Y., a corporation of New York. Application March 23, 1940, Serial No. 325,547. 18 Claims. (Cl. 96—26).



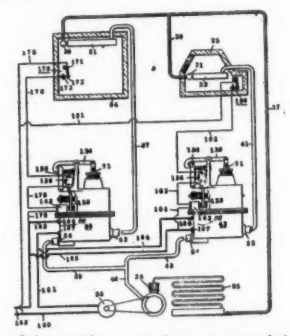
1. A heat-insulating covering comprising a plurality of substantially parallel asbestos rovings and braiding strands maintaining said rovings in assembled relationship to form a blanket, said braiding strands securing each roving to an adjacent roving.

2,316,003. CONTROL APPARATUS. John P. Kriechbaum, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application June 7, 1941, Serial No. 397,039. 16 Claims. (Cl. 172—239).



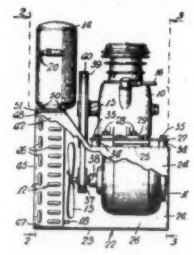
15. In a two-stage control system, in combination, a device biased to a safe position and adapted to be actuated to either of two active positions, means including a rotary electrical motor for operating said device, a lifting winding and a holding winding for said motor, a first pair of electrical connections through which said lifting winding may be energized, a second pair of electrical connections through which said holding winding may be energized, and multiple switch means operated simultaneously with said device for opening each of said first pair of connections at different predetermined positions of said device, while preventing closure of more than one of said second pair of connections at any position of said device.

2,316,066. CONTROL APPARATUS. Paul Haymond, Fairmont, W. Va. Application Aug. 3, -940, Serial No. 350,889. 15 Claims. (Cl. 62—4).



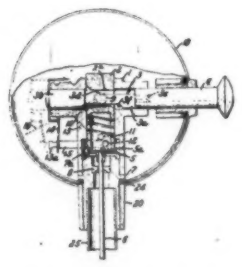
1. A refrigerating system comprising in combination, a plurality of evaporators; means for withdrawing gaseous refrigerant from the evaporators, condensing the refrigerant and delivering refrigerant to the evaporators; a valve for controlling the flow of refrigerant through one of the evaporators; means responsive to pressure changes in said one evaporator for actuating the valve; a second valve for controlling the flow of refriegrant through another of the evaporators; means responsive to pressure changes in said other evaporator for actuating the second valve; and control means actuated by the second mentioned means for initiating operation of the first mentioned means when the first mentioned valve is opened, said control means also being actuated by the third mentioned means for initiating operation of of the first mentioned means when the second valve is opened, and said control means being actuated by the second and third mentioned means to terminate operation of the first mentioned means only when both of said valves are closed.

2,316,284. REFRIGERATION. Clyde Edward Ploeger, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 7, 1940, Serial No. 368,997. 11 Claims. (Cl. 62—115).



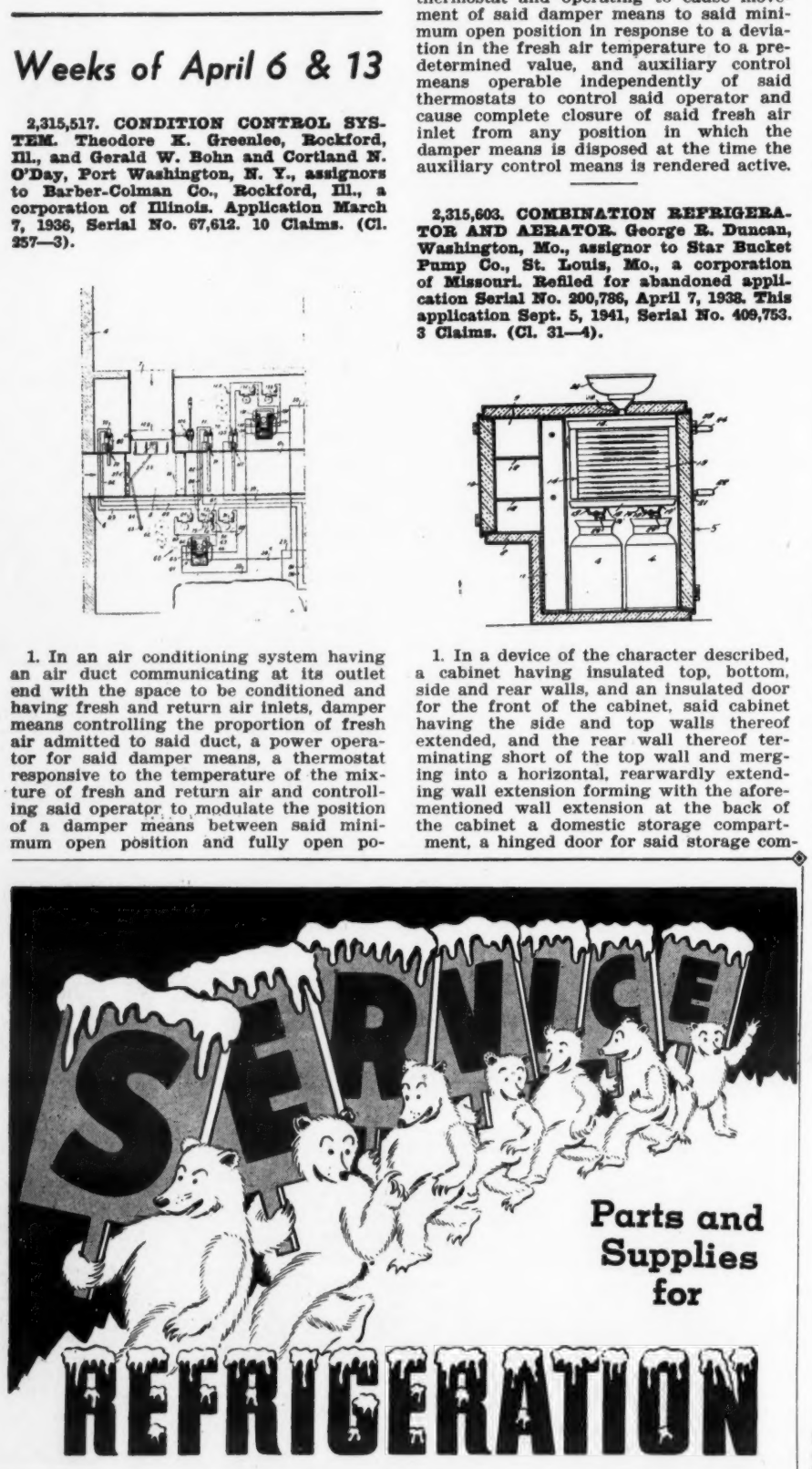
1. A condensing unit for refrigeration apparatus comprising a substantially U-shaped base, a condenser mounted within said base, a platform secured to the upper edges of said base, a compressor mounted on the top side of said platform, a motor operatively connected to said compressor and mounted on the lower side of said platform, and a fan operated by said motor for blowing air through said base and over said condenser.

2,316,391. TEMPERATURE MEASURING DEVICE. Franz Georg Bloch, Le Sentier, Vaud, Switzerland. Application Oct. 15, 1941, Serial No. 415,119. In Switzerland Dec. 7, 1940. 1 Claim. (Cl. 73—367).



A thermometer comprising a bimetallic temperature-responsive element of low torque, an indicating element, a brake member carried by said bimetallic element, an arresting member mounted for sliding movement into and out of contact with said brake member, a manually operable member mounted for sliding movement transversely of the path of movement of said arresting member and adapted to positively move said arresting member into and out of contact with said brake member, means for releasably holding said manually operable member in positions corresponding to arresting and non-arresting position of said arresting mem-

(Concluded on Page 23, Column 1)



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1728 S. Michigan Ave. Chicago, Ill. — Two Big Warehouses to Serve You — 134 Lafayette St. New York, N.Y.

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The Watchdog of the Nation's Food Supply

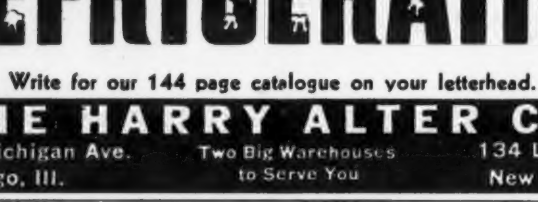
Humi-Temp Forced Convection Units—Patented CROSS-FIN-COILS — Bare Tube Coils — Zinc Fused Steel Plate Coils—Disseminator Pans — Heat Exchangers—Evaporative Condensers — Instantaneous Water Coolers —

See Your Jobber or Write Direct

LARKIN COILS, INC.
519 MEMORIAL DR., S. E., ATLANTA, GA.

LARKIN
REFRIGERATION PRODUCTS

KASON HARDWARE



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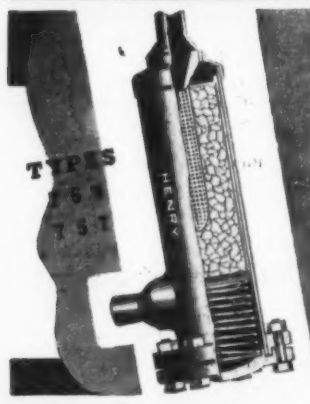
★ A COMPREHENSIVE LINE OF QUALITY HARDWARE FOR COMMERCIAL REFRIGERATORS ★
KASON HARDWARE CORP'N . . . . 127 Wallabout Street, Brooklyn, New York

HENRY



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With Side Outlet and Dispersion Tube

This exceptional design permits easy removal and replacement of cartridge without loosening end connections. Dispersion tube for increasing drying efficiency and minimizing pressure drop is incorporated as integral part of refill cartridge.

Ask your jobber for it.

FILLED WITH SILICA GEL OR ACTIVATED ALUMINA

HENRY VALVE CO. 1001-19 N. SPAULDING AVE. CHICAGO, ILLINOIS

CLASSIFIED ADVERTISING

RATES for "Positions Wanted," 5¢ per word; minimum charge, $2.50. Three consecutive insertions, 12½¢ per word; minimum charge, $6.25.

RATES for all other classifications, 10¢ per word, minimum charge, $5.00 per insertion. Three consecutive insertions, 25¢ per word, minimum charge, $12.50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

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75 CROSLEY ¼ hp. refrigerated portable air conditioners; 50 Honor Brand Frosted Food Cabinets; 250 Crosley absorption type (icy ball) refrigeration units; display cases; fountains; household and commercial refrigerators; also large stock of electrical appliances. INTERSTATE, 600 Broadway, New York City, Walker 5-2755.

CARBON TETACHLORIDE, $1.40 per gallon in 5 gallon lots; limited quantity. $1 deposit for container. ⅛ to ½ H.P. air cooled condensers, $6.00. ⅛ to ½ H.P. 2 cylinder Frigidaire compressor, $7.00. All used, in good condition. F.O.B. EDISON COOLING CORP., 310 E. 149th St., New York City.

FARM FREEZER: Immediate delivery. Quantity 2 and 4 hole cabinets with 60 cycle 110 volt units. Excellent condition. Standard make. Box 1444, Air Conditioning & Refrigeration News, Detroit, Mich.

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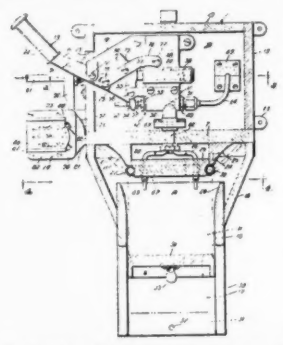
Patents (Cont.)

(Concluded from Page 22, Column 4)

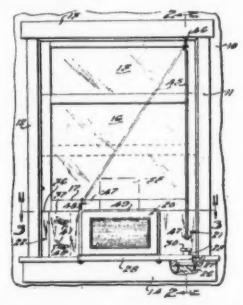
ber, means including a resilient member connecting said manually operable member with said indicating element for imparting motion to said indicating element upon operation of said manually operable member to move said arresting member into arresting position and means including a stop carried by said bimetallic element for limiting the amount of movement of said indicating element in accordance with the position at which the bimetallic element is arrested.

2,316,423. DEVICE FOR PROVIDING REFRIGERANTS IN CONTAINERS. Leo M. Harvey, La Canada, and Herbert Harvey and Reuben Hill, Los Angeles, Calif.; said Herbert Harvey and said Hill assignors to said Leo M. Harvey. Application June 23, 1939, Serial No. 280,818. 15 Claims. (Cl. 226—19).



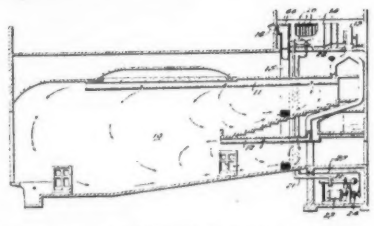
15. A device for providing a refrigerant in a container having an open end comprising a body having a compartment for receiving and confining the container, the outer end of the compartment being open to admit the container, sealing means in the body facing outwardly at the inner end of the compartment to be engageable by the end face of the container at the open end of the container to provide a seal between the container and body when the container is positioned in the body, and means for discharging a refrigerant into said open end of the container when the same is positioned in the compartment.

2,316,640. AIR CONDITIONING UNIT MOUNTING. Burdell S. Williams, Dayton, Ohio, assignor to Chrysler Corp., Detroit, Mich., a corporation of Delaware. Application May 6, 1940, Serial No. 333,515. 4 Claims. (Cl. 98—99).



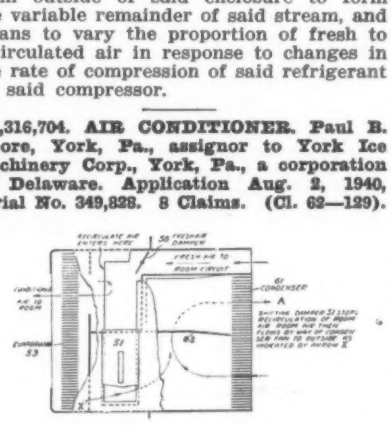
1. The combination with the wall of an enclosure having a window opening therein, of a window ledge air conditioning unit resting, when in use, on the lower edge of said window opening, and means associated with said wall and said unit for pivotally fastening said unit to said wall adjacent one side of said window opening whereby said unit may be swung from its position of use upon the lower edge of said window opening to a position inside of the room for permitting free egress and ingress through said opening comprising a pivot post mounted on the ledge of said window, a bar fastened to said unit and pivotally associated with said pivot post, and a cam rotatably mounted on said pivot post for raising said bar in order to permit swinging of the unit.

2,316,641. AIR CONDITIONING METHOD AND APPARATUS. James E. Wilson, Detroit, Mich., assignor to Chrysler Corp., Detroit, Mich., a corporation of Delaware. Application Jan. 9, 1941, Serial No. 373,823. 14 Claims. (Cl. 62—6).



1. An air conditioning system comprising a compressor-condenser-expander system of refrigeration, said compressor comprising means to vary the rate of compression of refrigerant in response to the total load on said expander, air circulating means for passing a stream of air in heat transferring relation with said expander and into the enclosure being conditioned, means to supply recirculated air from said enclosure to form a variable part of said stream, means to supply fresh air from outside of said enclosure to form the variable remainder of said stream, and means to vary the proportion of fresh to recirculated air in response to changes in the rate of compression of said refrigerant by said compressor.

2,316,704. AIR CONDITIONER. Paul B. Moore, York, Pa., assignor to York Ice Machinery Corp., York, Pa., a corporation of Delaware. Application Aug. 2, 1940, Serial No. 349,828. 8 Claims. (Cl. 62—129).



1. The combination of a unit air conditioner having means defining two air circuits, a room air circuit having a main inlet from the room whose air is to be conditioned, a secondary inlet of limited capacity leading from a space external to the room and a discharge into said room, and a condenser air circuit having an inlet and a discharge both connected with space external to said room; a room circuit fan for circulating air in the room air circuit; a damper operable to throttle variably the secondary inlet to the room air circuit; a condenser circuit fan for circulating air in the condenser air circuit; a pump-out connection from the room to the intake of the condenser circuit fan; and damper means controlling the pump-out connection and the main inlet to the room air circuit, so arranged that when either is closed the other is open.

WPB Steel Director Holds No Hope of More For Civilians

CLEVELAND—Warning that "we will never have enough of anything until the war ends," H. G. Batcheller, Director of the WPB Steel Division, speaking here last week, pointed out that the current supply of steel is considerably less than demand, and that substantial cuts are being made in the amounts of steel requested by Claimant Agencies for use during the third quarter of 1943.

Commenting on the reductions in requests for steel, Mr. Batcheller ladi particular emphasis on the fact that stories and rumors to the effect that shifts in munitions production would result in a freer supply of steel, were completely untrue. They are, in fact, a direct threat to higher industrial production, he said.

Both production and distribution must be flexible enough to permit rapid shifts from one weapon to another, Mr. Batchellor declared. The problem of making enough steel of the right kind at the right time in the face of changing conditions dictated by military strategy and battlefield experience has been and will remain highly complex. This does not permit an easing of restrictions on less essential use of steel, he continued.

"If anything is certain in this war," he declared, "it is the immensity of the twin task of producing enough steel to win the war and of finding ways of distributing enough steel and other industrial products to rebuild the world and win the peace.

Total requests by the 16 Claimant Agencies for the third quarter, Mr. Batcheller said, amounted to about 21,000,000 tons of finished carbon steel. Available for allocation will be approximately 15,000,000 tons.

"While I can not give you specific tonnage figures for the individual Claimant Agencies, since the final decision has not yet been made by the WPB Requirements Committee, I can indicate to you in approximate terms the extent to which the requests for steel will have to be revised downward.

"The recommendations made to the Requirements Committee by the Steel Division, which may be adjusted slightly, give the following picture:

"The War Department's request for carbon steel to be delivered during July, August and September of this year will have to be cut by about 14%. And its request for alloys will have to be trimmed by one-sixth.

"The amount of carbon steel which the Steel Division has recommended for allocation to the Navy Department during the third quarter is 20% less than the stated requirement. And the Navy, like the Army, will probably have to get along with one-sixth less alloy steel during the third quarter than it requested.

"Similarly, the Steel Division has recommended a reduction of about 22% in Maritime Commission requests for carbon steel, 32% in the Lend-Lease Administration requests, and 40% in the Office of Defense Transportation request.

"It is difficult to make these reductions when we know that many of the requirements are not overstatements," the Steel Division Director added.

"The steel could be used in the full amounts asked for if we could provide it. The plain fact is that we cannot, and therefore must distribute the steel we have in the places that need it most.

'Black Market' Selling Of Furniture Now Under Investigation

WASHINGTON, D. C.—Black market operations in the manufacture and sale of upholstered furniture involving the use of steel springs, in violation of order L-135, have been uncovered and are being investigated by the compliance division of WPB, it is learned.

A second-hand bedspring black market which OPA tried to overcome several months ago by establishing dollars-and-cents ceiling prices is also thriving.

Arthur J. Ortner of the National Bedding & Upholstery Mfgrs. board of trade is in Washington to appeal for stricted enforcement of ceilings and also for fuller publicity on OPA actions against violators.

His statements reflect the situation that legitimate bedspring renovators and furniture manufacturers find themselves in. He indicated that the black market operations have made it all but impossible for some of the trade to function, and that they are planning to close their places of business for a month at least in protest against lax ceiling enforcement.

By indulging in black market methods, Ortner relates that some bedding manufacturers have paid as much as $6.50 to junkmen for used coiled bedsprings, or about $1.75 more than the ceiling price after renovation, and then have sold them to retailers for as much as $15.

Illegally priced living-room sets normally wholesaling for $90 are bringing as much as $125 to $135.

War plant area retailers outnumber any other group in willingness to meet the prices asked for this line of merchandise.

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Serve the Army
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ALL SIZES FOR SHIPBOARD AND LAND USE
MEET GOVT. SPECS.
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VISOLEAK reveals "hard to find" leaks of all refrigerants. Add 4 oz., plus an extra ounce for each 10 lbs. of refrigerant, to system.
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New Office To 'Procure' For Civilians Within WPB

(Concluded from Page 1, Column 5)

which in themselves form part of civilian requirements.

OCR will therefore be a claimant agency for all consumer goods and services whereas its predecessor, OCS, has been described as "a claimant agency for what nobody else wanted."

The endowment of OCR with such wide powers was regarded as an attempt to convince Congress, which had already gone half way toward the setting up of a civilian claimant agency independent of the WPB, that such a measure would not be necessary.

However, it is likely that those who favor a separate agency may question whether consumer requirements can ever be represented within the WPB since that agency deals primarily with production and is staffed largely with a production mind.

In order to correlate the policies of the Government Agencies concerned with the supply of civilian goods and services, the order establishes a sub-committee of the War Production Board, designated as the Civilian Requirements Policy Committee, composed of the following: Secretary of Agriculture, the Chairman of the War Manpower Commission, the Price Administrator, the Petroleum Administrator for War, and the Director of the Office of Defense Transportation. Mr. Nelson will be chairman and Mr. Whiteside vice chairman of the committee. In addition, the War Food Administrator of the National Housing Agency will be invited to sit with the committee.

To attain the specific objective of providing civilians with essential goods and services, the Vice Chairman of Civilian Requirements is empowered and directed to:

TO ACT AS CLAIMANT

"1. Determine requirements for consumer goods and services, and act as claimant therefor;

"2. Determine, within the limits of total allocations to the Office of Civilian Requirements by the Program Vice Chairman, the distribution of materials among different consumer goods and services; and certify, through the Operations Vice Chairman or other appropriate administrative channels, such distribution to the Industry Divisions for effectuation through orders, allocations, or other applicable means;

"3. Determine the policies of the War Production Board for rationing consumer goods and services, when necessary, and recommend to the Chairman the issuance of directives to the Office of Price Administration covering the specific rationing programs for consumer goods and services;

RECOMMENDED CHANGES

"4. Analyze and review proposed orders and the administration of existing orders so as to assure that such orders give full consideration to civilian needs, and recommend such changes as are considered necessary to provide adequate consumer goods and services;

"5 Initiate the formulation of plans and programs for simplification and standardization of consumer goods and services for the purpose of attaining the objective stated in Section 4.01 above;

"6. Plan, with the Division of Information and the Office of War Information, consumer information programs designed to give the public a full understanding of the programs and actions of the War Production Board to maintain the civilian economy at a level consistent with objectives;

ACT ON MANPOWER, TOO

"7. Determine the impact of manpower shortages upon the supply of essential consumer services and distribution; and, when necessary, determine the relative essentiality of different consumer goods and services, and report such determinations to the War Manpower Commission;

"8. Represent the Chairman of the War Production Board in contacts with the Office of Price Administration on matters relating to:

"1. The effect of pricing upon the production and distribution of consumer goods and services

"2. The coordination of rationing with production and distribution policies concerning consumer goods and services

"3. The coordination of price regulations with standardization and simplification of consumer goods and services;

"9. Establish effective relationships with appropriate Federal agencies concerned with civilian supply and requirements in order to assure coordinated action in achieving the objectives stated in this order;

"10. Prepare for the Chairman quarterly reports on the production and availability of consumer goods and services under the jurisdiction of the War Production Board."

The order provides procedure for carrying out the functions just enumerated. In estimating requirements for consumer goods and services, the Office of Civilian Requirements will obtain from the industry divisions of WPB whatever information may be needed, and the industry divisions will then translate these requirements into estimates of controlled materials needed for their production and submit them to the OCR for its approval and consolidation into total controlled material requirements for consumer goods and services.

OCR not only will estimate total requirements of controlled materials but will decide how this lump sum allocation of controlled materials shall be divided among the different consumer goods and services.

The Vice Chairman will be a member of all industry division requirements committees and of the main requirements committee. He will be a claimant before the committees for the controlled materials going into consumer goods and services.

The order provides that items allocated for consumer goods and services may not be diverted to other channels without authorization from OCR, thus assuring civilians the total amount of such items if necessary.

The Vice Chairman for OCR may also call meetings of Industry Advisory Committees. With the approval of the WPB Chairman, he may call general meetings of representatives of trade and industry.

The order provides for close cooperation between OCR and the Smaller War Plants Corp. in order that small business concerns will be utilized to the fullest degree practicable in the production and distribution of consumer goods and services.

Butcher To West Coast For Westinghouse

EAST PITTSBURGH, Pa.—Charles A. Butcher, formerly assistant to the national manager of the company's district manufacturing and repair department, has been named manager of that department for the entire Pacific coast district of Westinghouse. Mr. Butcher will succeed R. E. Powers, who has resigned.

The new Pacific coast district manufacturing and repair manager will have charge of activities of his department in a territory comprising all or parts of 11 western states, Alaska and the Hawaiian Islands. Included are the district headquarters plant at Emeryville, Calif., where he will make his own headquarters.

AFTER THE WAR *WHAT THEN?*

Some day the war will be over. On that day we shall discover that we have just begun to fight.

Some day ten, or fifteen, or twenty million men and women will come marching home. On that day we shall discover that the old battle for production and markets has begun all over again . . . but with new and more powerful weapons. And one of the most powerful of these new weapons will be Bush refrigerating equipment.

Refrigeration will create new industrial processes . . . improve old ones. Refrigeration will make possible the use of new and revolutionary materials . . . increase the economy of old ones. Refrigeration will augment the effectiveness of of labor . . . make industry more attractive to capital. Aerial transports serving new international markets will fly faster and farther with Bush equipment. We shall control climate . . . rather than permit it to control us.

Some day refrigeration will be as necessary to industry and transportation as it is today to the preservation of foods. On that day we shall be ready . . . ready with research . . . ready with engineering . . . ready with plant and personnel . . . ready with the actual EXPERIENCE to cash in, and to enable YOU to cash in, on what economists predict will be the biggest boom of all time.

And in the meantime . . . well, if you're in any doubt about what to do in the meantime, just go back to sleep, buddy. Just go back to sleep. Prosperity will definitely disagree with you.

Yours for sticking with the ship . . . particularly when it's going in the right direction.

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